

TAKING A TIMEOUT TO ENSURE WELL-BEING: SOCIAL WORK  
INVOLVEMENT IN COLLEGE SPORTS

Matthew Allen Moore

Submitted to the faculty of the University Graduate School  
in partial fulfillment of the requirements  
for the degree  
Doctor of Philosophy  
in the School of Social Work,  
Indiana University

April 2015

Accepted by the Graduate Faculty, Indiana University, in partial fulfillment of the requirements for the degree Doctor of Philosophy.

---

W. Patrick Sullivan, Ph. D., Chair

---

Cathy Pike, Ph. D.

Doctoral Committee

---

Hea-Won Kim, Ph. D.

February 23, 2015

---

Mark Urtel, Ed. D.

2015©

Matthew Allen Moore

## DEDICATION

This work is dedicated to my wife, Lindsay, and my three children, Brooklyn, Bronson, and Maverick. Without their support completing this process would not be possible. I only hope I have made them as proud as they make me each day.

## ACKNOWLEDGEMENTS

I want to begin by thanking my parents, John and Teresa Moore. They have always been there to support me regardless of the challenge. My dad continually instills perseverance and creativity in me. My mom has taught me that humor and light-heartedness make obtaining your goals enjoyable. At every crossroad in life, I know they will provide sound guidance and do all that is possible to help me achieve my goals. Mom and dad, I love you very much and this degree is as much about you as it is about me.

I also want to thank all the members of my dissertation committee. Your guidance throughout this process made my dissertation both educational and fun. I only hope I can grow in my career to eventually give back to future doctoral students in the way you have given back to me. I value each of you as leaders in education, but more importantly as mentors and colleagues.

I wish to mention the following individuals who have also supported me through this process J.P. and Whitney Moore, Kara Moore, Tim and Jan Ludwig, the doctoral faculty at the Indiana University School of Social Work, and my fellow doctoral colleagues. A special recognition to Stephanie Quiring for being my partner in crime for the past three years.

Finally, thank you to all the colleges and universities that participated in this research study. While this dissertation is important for my professional growth and allowed me to research one of my biggest passions in life, it is ultimately a client-centered document. I can only hope that what was learned through this research is taken to heart and influences the lives of a countless number of college athletes.

Matthew Allen Moore

TAKING A TIMEOUT TO ENSURE WELL-BEING: SOCIAL WORK  
INVOLVEMENT IN COLLEGE SPORTS

**Background:** Participation in college athletics comes with inherent risks. Many of these risks relate to the psychosocial safety and well-being of college athletes. These risks include depression, suicide, alcohol abuse, substance abuse, and the development of an eating disorder. This study specifically examined the current state of psychosocial needs amongst college athletes, the availability of services that address psychosocial needs, the comfort level college athletes have with seeking services, and the identification of barriers that influence whether or not a college athlete seeks necessary help.

**Methods:** This study used a web-based survey to gather information from a proportionate stratified random sample of both college athletic directors ( $N = 132$ ) and college athletes ( $N = 349$ ) across all NCAA division levels. Descriptive statistics, parametric tests, and multivariate tests were used to analyze the research questions. This study used NCAA division level and the profile of a college athlete's sport as independent variables. The researcher created composite scores for athletic, academic, and psychosocial services to serve as dependent variables. The researcher also created a composite score for perceived barriers.

**Results:** There were multiple significant findings for this research study. One key finding was that Division I and Division II college athletes had significantly higher psychosocial needs than Division III college athletes. Another key finding was that Division I college athletes experienced significantly lower levels of comfort in seeking

psychosocial services than Division II and Division III college athletes. Furthermore, Division I college athletes reported significantly higher levels of barriers to seeking necessary services than Division II and Division III college athletes.

**Implications:** These significant findings point clearly to the fact that more must be done to ensure the psychosocial safety and well-being of college athletes. This includes athletic departments more clearly understanding the needs of their college athletes, having services more readily available, finding ways to promote a college athlete's disclosure of a psychosocial risk, and working to address current barriers that prevent college athletes from seeking help. One idea for improving the current state of services explored in this research is the interprofessional collaboration of social workers with college athletic departments.

W. Patrick Sullivan, Ph. D., Chair

## TABLE OF CONTENTS

LIST OF TABLES	x
LIST OF FIGURES	xii
CHAPTER ONE – INTRODUCTION	1
CHAPTER TWO – LITERATURE REVIEW	7
Psychosocial Risks of College Athletes	7
Limitations of Current Literature	17
The Current Approach to Athletic Support Services	19
Gaps in Current Research	23
CHAPTER THREE – METHODS	28
Research Questions	28
Research Design	31
Study Participants	33
Measures/Instruments	36
Data Collection	40
Data Analysis	41
CHAPTER FOUR – RESULTS	44
Descriptive Statistics	44
Statistical Assumptions	51
Research Question One	56
Research Question Two	58
Research Question Three	60
Research Question Four	62



Research Question Five	63
Research Question Six	65
CHAPTER FIVE – DISCUSSION AND CONCLUSION	67
Significant Findings	67
Athletic Well-being Model	76
Study Limitations	88
Integration of Social Workers into Athletics	90
Directions for Future Research	91
Pilot Project	93
Conclusion	93
APPENDICES	95
Appendix A – Athletic Director Survey	95
Appendix B – College Athlete Survey	103
Appendix C – Pre-notification Letter	111
Appendix D – Study Information Sheet	112
Appendix E – Cover Letter (Athletic Director)	114
Appendix F – Cover Letter (College Athletes)	115
Appendix G – Follow-up Emails	116
REFERENCES	117
CURRICULUM VITAE	

## LIST OF TABLES

Table 1. Research Questions, Variables, and Statistical Tests	30
Table 2. Athletic Director Demographics	34
Table 3. College Athlete Demographics	35
Table 4. College Sports Played	36
Table 5. Service Needs: Athletic Directors and College Athletes	45
Table 6. Number of College Athletes with Moderate to Severe Academic and Psychosocial Needs	45
Table 7. Other Services that would benefit College Athletes	46
Table 8. Availability of Support Services: Perceptions of Athletic Directors and College Athletes	47
Table 9. Other Services Available to College Athletes	48
Table 10. Comfort with Seeking Support Services: College Athletes	48
Table 11. College Athletes with Little to No Comfort with Seeking Support Services	49
Table 12. Barriers to Seeking Services: Athletic Directors and College Athletes	50
Table 13. Additional Barriers to Seeking Services: College Athletes	51
Table 14. MANOVA Cross Tabulation: Athletic Directors	52
Table 15. MANOVA Cross Tabulation: College Athletes	52
Table 16. Results of Bartlett's Test of Sphericity	53
Table 17. MANOVA Correlations Summary Table: College Athletes	54
Table 18. MANOVA Correlations Summary Table: Athletic Directors	55
Table 19. Results for perceived Service Needs based on NCAA Division (Athletic Directors)	57

Table 20. Results for perceived Service Needs based on NCAA Division (College Athletes)	59
Table 21. Results for perceived Service Needs based on Profile of Sport (College Athletes)	60
Table 22. Results for Service Availability (Athletic Directors)	61
Table 23. Results for Service Availability (College Athletes)	63
Table 24. Results for Comfort Seeking Services based on NCAA Division (College Athletes)	64
Table 25. Results for Comfort Seeking Services based on Profile of Sport (College Athletes)	65
Table 26. Results for Service Barriers (College Athletes)	66

LIST OF FIGURES

Figure 1. Ecological Map for the Athletic Well-being Model	79
Figure 2. Critical Social Policy for the Athletic Well-being Model	86

## **CHAPTER ONE – INTRODUCTION**

In 2013, there were over 450,000 college athletes competing in 23 sports across in the United States. According to Forbes Magazine (2014), these sporting events attract millions of viewers each day, especially football bowl games and basketball's March Madness. Many of us follow college sports to cheer for our favorite college athlete and team, but may be unaware of both the positive and negative impact athletic participation can have on a college athlete's physical, psychological, and social well-being (Watson & Kissinger, 2007).

Physically, participation in athletics requires vigorous activity, which can lead to increased strength, more energy, and an overall healthier body (Downs & Ashton, 2011). Psychologically, athletic participation enhances one's ability to think critically, solve problems, and develop leadership skills (e.g., conflict resolution) (Gayles & Hu, 2009). Socially, athletic participation provides college athletes with the opportunity to interact with culturally diverse peers and helps build strong communication skills (Gayles & Hu, 2009).

Not to mention, simply being a college athlete provides opportunities that promote overall well-being not presented to all students (e.g., separate housing, state of the art fitness centers, dedicated academic advisors and orientation assistance, scheduling assistance, built-in study tables, and possible scholarship) (Armstrong & Oomen-Early, 2009). It is because of all these positive attributes that some individuals believe that college athletes are immune to the difficulties facing other college students (Armstrong & Oomen-Early, 2009). These difficulties might include developing new relationships,

managing academic stress, transitioning to a life of independence, and learning how best to navigate new environments (Hurst, Baranik, & Daniel, 2013; Lester, 2014).

However, the reality is that college athletes are in jeopardy for developing a variety of psychosocial risks (Sack, 2001). For example, research shows as many as 20% of college athletes meet diagnostic criteria for depression, which is up to 12% higher than non-athletes (Gardiner, 2006). This research refers to a psychosocial risk as any challenge to the psychological or social development of a college athlete that is a result of his or her participation in an athletic environment (Anderson, Petrie, & Neumann, 2011; Beauchemin, 2014; Watson & Kissinger, 2007). Drawing attention to the short- and long-term effects of the psychosocial risks impacting college athletes is of growing importance as research illustrates that college athletes are not likely to seek help for sport-related psychosocial risks on their own (Anshel, Kang, & Miesner, 2010).

Current literature examining psychosocial risks of college athletes correlates athletic participation (both scholarship and non-scholarship) with an increase in depression and suicide attempts (Armstrong & Oomen-Early, 2009; Gill, 2008), alcohol use (Ford, 2007a; Williams, Perko, Udan, Leeper, Belcher, & Leaver-Dunn, 2008; Yusko, Buckman, White, & Pandina, 2008), illicit substance use (including performance enhancers) (Yusko et al., 2008), the development of eating disorders (Greenleaf, Petrie, Carter, & Reel, 2009; McLester, Hardin, & Hoppe, 2014), and lower levels of overall well-being (Watson & Kissinger, 2007).

Furthermore, a combination of familial and environmental expectations (not just self-driven causes) confound these risks (Watson & Kissinger, 2007). These expectations might include performance measures established by teammates and/or coaches, sport-

related time commitments, requirements of an athletic scholarship, and pressure to continue family legacies and traditions. While many of the psychosocial risks impacting college athletes are no different than those facing other college students, participation in college athletics introduces variables that make the identification and treatment of psychosocial risks unique. For example, college athletes often believe people only respect them for their athletic abilities and that they have no connection (lack of belongingness) to the overall campus population (Maniar, Chamberlin, & Moore, 2005). College athletes also struggle navigating their joint role of being both a student and a college athlete (Harrison, 1981; Parsons, 2013) and lack the self-confidence needed to be successful outside of athletic competition (Gill, 2014; Parsons, 2013; Remer, Tongate, & Watson, 1978).

Recognizing these confounding variables and the correlation between athletic participation and the development of a psychosocial risk, the National Collegiate Athletic Association (NCAA), established recommendations and policies for ensuring college athlete safety and well-being (NCAA, 2013b). These recommendations and policies speak directly to the certainty of occurrences of depression, suicide, alcohol abuse, substance abuse, and eating disorders within athletics. In addition, these recommendations shed light on how psychosocial risks impact the overall safety and well-being of a college athlete. The NCAA established these recommendations out of concern that not enough was being done to support college athletes in overcoming psychosocial challenges (NCAA, 2013b).

Even if services are available, there are also legitimate concerns about whether or not college athletes feel comfortable seeking help for a psychosocial risk (Gill, 2008).

Many college athletes believe that disclosing a psychosocial risk is a sign of personal weakness and failure (Gill, 2009). College athletes also believe that disclosing a psychosocial risk could result in loss of playing time, loss of scholarship, loss of relationships with teammates, and cause disappointment in the eyes of a coaching staff and their informal support network (Ford, 2007a; Williams et al., 2008). Gearity (2010) found that participants feel that athletic and academic success is more important than personal safety and well-being in the eyes of their coaches and other leaders within a university's athletic department. If college athletes feel that sport and academic performance is more important than seeking help for their personal challenges, the rate of psychosocial risks will likely increase over time. Changing this perception is vital to changing the future lives of college athletes who are battling a variety of debilitating challenges.

Considering these factors, this research explores how college athletes and athletic directors respond to a combination of research questions. There were two questions answered by athletic directors. First, what athletic, academic, and psychosocial services do athletic directors believe are needed by their college athletes? Second, to what extent do athletic directors believe that athletic, academic, and psychosocial services are available to college athletes?

There were four questions answered by college athletes. First, what are the current, self-identified psychosocial needs of college athletes? Second, to what extent do college athletes believe that athletic, academic, and psychosocial services are available to them? Third, how comfortable are college athletes with seeking athletic, academic, and



psychosocial services? Fourth, what barriers do college athletes currently perceive as influencing whether or not they will seek necessary support services?

By understanding current perceptions of service delivery, this research could help the NCAA and athletic programs recognize gaps in service delivery and explore new ideas for meeting the unique needs of college athletes. Particularly, this research could illustrate how an Athletic Well-being Model might benefit the world of college athletics by helping to make services more available, accessible, and acceptable in the eyes of a college athlete. The social work profession (athletic social workers) might be the best discipline to properly utilize such a model.

Furthermore, answers to these research questions have the ability to significantly add to the literature on college athletics. First, determining what athletic directors view as needed services will shed light on whether or not they perceive psychosocial risks as being a common occurrence in athletics. Having information about the perceived needs of college athletes will put into picture the current challenges facing those involved in an athletic environment. More specifically, the answers to these research questions will highlight whether athletic directors and college athletes both express a need for mental health services, suicide prevention, alcohol addiction services, and substance abuse services. Or will they only see the need for services that support academic development and sport performance? In order to truly help college athletes, both athletic directors and college athletes must recognize that psychosocial needs are prevalent in athletics. This recognition can go a long way in promoting a college athlete's overall health and their future as a contributing citizen to society.

Second, if college athletes and athletic directors see psychosocial services as needed, this study will explore whether these needed services are available. The NCAA does require schools to have measures in place for assessing a college athlete's total well-being; however, this can be achieved through general campus counseling programs and not necessarily services that focus solely on the psychosocial needs of college athletes (Gill, 2008). Particularly, this research could illustrate whether or not new services are needed to address gaps, if there needs to be a bigger push to educate college athletes on all services available to them, or if there needs to be changes made to the existing service structure to make services more accessible and acceptable. A deeper understanding of current service availability will help generate these new ideas for ensuring college athlete safety and well-being in a competitive environment.

Third, even if needed services are available, college athletes must believe that it is acceptable to use them. Thus, this research will explore how acceptable college athletes feel it is to receive services for academics, sport performance, and psychosocial risks. If college athletes feel it is more acceptable to receive help for their academics and sport performance than their psychosocial risks, a paradigm shift must occur. College athletes must feel safe to disclose their challenges otherwise these challenges could result in debilitating behaviors – behaviors that could have a lifelong impact on a college athlete. Additionally, identifying the barriers that impact whether or not a college athlete seeks services is vital to proper service delivery. If colleges and universities do not work to remove these barriers, college athletes will continue to not seek the services they need to support personal growth.

## CHAPTER TWO – LITERATURE REVIEW

### **Psychosocial Risks of College Athletes**

Research on the psychosocial risks of college athletes often considers multiple confounding variables. Variables include, but are not limited to, gender, ethnicity/race, competition level (Division I, II, and III), type of sport (team or individual), profile of sport (high profile or low profile), the college or university's religious affiliation, and affiliation as a historically black college or university (HBCU). While researchers explore these confounding variables, there are existing gaps in the literature. There is not research exploring how each of these confounding variables impact all the psychosocial risks reviewed in this study. Future research needs to more closely explore how all of these variables impact the development of a psychosocial risk. The following sections explore how and why many of these variables impact college athletes in relation to depression, suicide, alcohol use, illicit substance use, eating disorders, and general well-being.

**Depression and suicide.** An estimated 10% - 20% (or as many as 90,000) of the 450,000 college athletes suffer from depression, which is a higher prevalence rate than the non-athlete population for both males and females, which is roughly 8% (Gardiner, 2006). Overall, female college athletes are 4% more likely to experience sport-related depression than their male counterparts, which is a statistically significant difference (Armstrong & Oomen-Early, 2009). While female college athletes are more likely to experience depression, practically speaking, the focus of this research is examining how to help improve depression rates of all college athletes – not just females.

Miller and Hoffman (2009) found that male and female college athletes are 3% more likely than non-athletes to attempt suicide. Approximately 5% or 22,500 college athletes contemplate suicide as compared to 2% of non-athletes, which is a statistically significant finding. Some feel college athletes are more likely to suffer from depression and attempt suicide because they cannot handle athletic pressure, believe their identity is only based on their athletic association, do not believe a helping professional would understand their unique situations, are struggling academically, and/or feel isolated from the overall campus population (DeFreese & Smith, 2013; Maniar et al., 2005; Miller & Hoffman, 2009). College athletes suffering from depressive symptoms and suicidal ideation are also more likely to use alcohol and illicit substances as a coping mechanism (dual diagnosis) (Gill, 2008).

Little research is available on the association between a college athlete's ethnicity/race and mental health risks. There is also little research available about the mental health risks faced by college athletes at a HBCU versus other colleges and universities. Yet, what is available points directly to the isolation and discrimination that black college athletes face (Agyemang, Singer, & DeLorme, 2010). In particular, black college athletes are more likely than white college athletes to be viewed only as college athletes and not as students, are more likely to be isolated from other members of the campus community, and are more likely to face academic discrimination by faculty members (Cornelius, 1995; Steinfeldt, Reed, & Steinfeldt, 2010). For black college athletes, negotiating their racial and athletic identities is difficult because both roles are linked together in the minds of others, which certainly poses risks to a college athlete's mental well-being (Hudson-Banks & Kohn-Woods, 2007; Pillay, 2005; Steinfeldt et al.,

2010). Not to mention, for many black college athletes, they see athletics as their vehicle to self-realization and socioeconomic advancement (Edwards, 2000). Unfortunately, for most of these college athletes, their dreams of becoming the next professional superstar will not come true. This is detrimental to these black college athletes as many of them dedicated their entire college career to athletics, which meant they spent little time on their career and occupational development (Edwards, 2000).

Storch, Storch, Welsh, and Okun (2002) found that religious affiliation had no significant impact on rates of depression or suicide. Yet, Hoffman (1992) found that religion serves as a protective factor to college athletes by helping them manage the stress of athletics using prayer and other spiritual motivators.

**Alcohol use.** In recent studies, researchers discovered college athletes are significantly more likely than non-athletes to engage in binge drinking and other forms of high-risk alcohol consumption (Ford, 2007a; Williams et al., 2008; Yusko et al., 2008). Binge drinking is a pattern of drinking that brings a person's blood alcohol concentration to 0.08 grams or above. This typically happens when men consume five or more drinks, and when women consume four or more drinks in about two hours (Williams et al., 2008). Ford (2007a) found that over 52% of college athletes reported multiple episodes of binge drinking as compared to 43% of non-athletes. Binge drinking appears to be a more severe problem amongst male college athletes. Yusko and colleagues (2008) found that 40% of male college athletes reported episodes of binge drinking compared to 27% of male non-athletes. These statistically significant findings shed light on the binge drinking risks of college athletes. College athletes participating in a team sport (e.g., basketball) versus an individual sport (e.g., wrestling) were more likely to engage in high

risk alcohol consumption (Brenner & Swanik, 2007). College athletes competing at the Division I level (78%) were more likely to participate in risky behaviors involving the usage of alcohol than college athletes at the Division II (76%) or Division III (66%) level (Brenner & Swanik, 2007).

The high prevalence rate of alcohol abuse among college athletes is attributed to many factors. Studies indicate that college athletes often drink as a way to socialize and impress their teammates (Wahesh, Milroy, Lewis, Orsini, & Wyrick, 2013; Williams et al., 2008; Zamboanga, Rodriguez, & Horton, 2008). College athletes also use alcohol as a sport-related coping mechanism (e.g., to overcome athletic pressure) or as a sport-related positive reinforcement mechanism (e.g., as a tool to enhance athletic performance) (Martens, Pederson, Smith, Stewart, & O'Brien, 2011; Wahesh et al., 2013). While some college athletes see alcohol as an enhancing mechanism, research clearly links alcohol abuse to challenges with dehydration and problems of the central nervous system (Dziedzicki et al., 2013). These challenges could certainly impact athletic performance. Other reasons for alcohol consumption among college athletes include the use of alcohol as a tool to overcome academic stress (Ford, 2007a) and a college athlete's belief that alcohol consumption will help him or her fit in with the overall campus population (Williams et al., 2008).

Such findings are applicable to both male and female college athletes (Yusko et al., 2008). White male college athletes are the most likely to engage in binge drinking (Yusko et al., 2008). College athletes that attend a HBCU participate in dangerous alcohol consumption 51% of the time, which is slightly less than the rate at non HBCU schools (52% - 85%) (Wagner, Liles, Broadnax, & Nuriddin-Little, 2006). Williams and

colleagues (2008) found that college athletes reported that the alcohol consumption rules of coaching staff and athletic departments had no impact on their behaviors. Despite the previous fact, college athletes were less likely to binge drink in-season than off-season, which might point at the fact that they understand drinking during the season might have consequences (Weaver et al., 2013). Furthermore, a college or university's religious affiliation did not decrease the likelihood of alcohol consumption among college athletes (Frye, Allen, & Drinnon, 2010). College athletes at religious-affiliated schools were as likely as their counterparts at non-religious-affiliated schools to engage in risky drinking behaviors. College athletes were three times more likely than non-athletes to gamble when intoxicated (Weiss, 2010). Also, college athletes were more likely than non-athletes to engage in risky sexual behaviors (e.g., sex with multiple partners) when intoxicated (Grossbard, Lee, Neighbors, Hendershot, & Larimer, 2007).

**Illicit substance abuse.** In addition to higher rates of alcohol consumption, college athletes are significantly more likely than non-athletes to use certain forms of illicit drugs and performance enhancing drugs (PEDs, substances used by people to improve their performance in the sports in which they participate) (Yusko et al., 2008). Yusko and colleagues (2008) found that male college athletes are more likely than non-athletes to use methamphetamines, banned performance enhancers, and approved performance enhancers. During 2007, male college athletes reported using banned performance enhancers 6% more and other performance enhancing drugs 10% more than non-athletes (Yusko et al., 2008). Male college athletes who use performance enhancing drugs are also more likely to abuse alcohol (Buckman, Yusko, White, & Pandina, 2009). These college athletes are equally more likely to smoke cigarettes, to abuse dietary

supplements, and to use other forms of narcotics (Buckman, Farris, & Yusko, 2013).

Overall, male college athletes are more likely to use illicit substances than female college athletes (Buckman, Yusko, Farris, White, & Pandina, 2011).

Both male and female college athletes are significantly less likely to use other drugs such as cocaine, heroin, prescription drugs, and marijuana compared to non-athletes (Yusko et al., 2008). Still, these forms of substance use and abuse occur on a regular basis. For example, in 2007, 12% of male college athletes reported using cocaine and 27% of male college athletes and 25% of female college athletes reported using marijuana (Gill, 2009; Yusko et al., 2008). These percentages are 15%, 41%, and 48% in the general college population respectively (Gill, 2009; Yusko et al., 2008). Ford (2008) believes that participation in college athletics is a protective factor, but still believes that college athletes still experience challenges associated with substance abuse.

Researchers attribute substance use among college athletes to many factors. College athletes use illicit substances for some of the following reasons (1) to improve athletic performance, (2) to treat sport-related injuries, (3) for social and personal reasons, (4) as an energy boost, (5) to suppress appetite for weight loss purposes, (6) to manage sport-related stress, and (7) to deal with the general stress of college life (Green, 2001). College athletes also use drugs to increase their feelings of belongingness with the overall campus population (Williams et al., 2008).

Another key finding in the research on substance use with college athletes is that substance use typically increases when a college athlete is out of season (Yusko et al., 2008). Furthermore, the use of amphetamines, marijuana, and psychedelics were highest amongst Division III college athletes (Green, 2001). Division II college athletes had the



highest use of cocaine (2%) (Green, 2001). White college athletes are also most likely to use illicit substances (Green, 2001). Ford (2007b) found that college athletes participating in team sports (up to 18% depending on the sport) were more likely to use illicit substances than college athletes competing in individual sports (up to 12% depending on the sport). Rates were also higher in high profile sports (Ford, 2007b). College athletes with strong religious affiliation were also less likely to use substances as spirituality was a factor in the hesitation against doping behavior (Zenic, Stipic, & Sekulic, 2013).

**Eating disorders.** The likelihood of a college athlete developing an eating disorder varies based on gender. As a standard rule, female college students face internal and external pressures to remain thin (Greenleaf et al., 2009). Internal and external pressures might include negative mood states, low self-esteem, desire for weight control, involvement in a hurtful relationship outside of athletics, and perfectionism (Arthur-Cameselle & Quatromoni, 2011). Findings on whether athletic involvement places female college athletes at greater risk of developing an eating disorder are inconsistent.

On one hand, researchers correlate a female's participation in athletics with heightened concerns about weight, the promotion of pathogenic eating behaviors, and higher prevalence rates of eating disorders compared to females not participating in a sport (Greenleaf et al., 2009). Greenleaf and colleagues (2009) found that 19% of female college athletes showed partial symptoms of a clinical eating disorder, which is 4% higher than non-athletes. In an earlier study, Black and Burckes-Miller (1988), indicated that female college athletes fasted, used diuretics, vomited, and used laxatives to control

their weight. The female college athletes in both of these studies participated in a wide variety of sports (e.g., basketball, track and field, and gymnastics).

Conversely, other studies found that a female's participation in college sports was a protective factor to the development of an eating disorder. Kirk, Singh, and Getz (2001) found that 11% of female college athletes showed partial symptoms of a clinical eating disorder, which is below the rate in the general college population (15%). McLester and colleagues (2014) found that 8% of college athletes were susceptible to an eating disorder. Still, this study found that 10% of college athletes had low self-esteem and 12% of college athletes were dissatisfied with their current body image, which does generate cause for concern.

While study results vary, research shows that female college athletes struggle with eating disorders much like other female college students. However, in addition to the internal and external pressures discussed above, female college athletes are also likely to develop eating disorders to handle circumstances unique to athletic participation. Such circumstances might include modeling the behaviors of teammates, enhancing sport performance, and addressing negative comments of a coach, teammate, opposing players, and fans (Arthur-Cameselle & Quatromoni, 2010; Schwarz, Gairrett, Aruguete, & Gold, 2005).

Male college athletes are less likely to develop an eating disorder than female college athletes (Baum, 2006). In 2005, 2% of male college athletes met clinical criteria for diagnosis of an eating disorder (Sanford-Martens, Davidson, Yakushko, Martens, & Hinton, 2005). This percentage is less than female college athletes and also below the percentage of males not participating in athletics (Sanford-Martens et al., 2005). Still,

22.2% of college athletes met subclinical characteristics for bulimia, anorexia, and body dysmorphia (Sanford-Martens et al., 2005). Additionally, college wrestlers as compared to other male college athletes and non-athletes are more than twice as likely to develop an eating disorder (Bratland-Sanda & Sundgot-Borgen, 2013; Byrne & McLean, 2002). College wrestlers lose as much as 11 pounds before a match through starvation, chronic dieting, and avoidance of certain foods (Nitzke, Voichick, & Olson, 1992). These behaviors place college athletes at serious risk of becoming anorexic or bulimic (Byrne & McLean, 2002). Male college athletes were most likely to develop an eating disorder to address coach/teammate pressure, to lose or gain weight for weigh-in, to enhance sport performance, or because of their internal association that more fit college athletes receive more playing time (Baum, 2006; Chatterton & Petrie, 2013; Galli, Reel, Petrie, Greenleaf, & Carter, 2011).

Eating disorders are more common among male and female college athletes who participate in a sport where body weight is emphasized (e.g., cheerleading, distance running, and wrestling) (Baum, 2006; Kirk et al., 2001). Furthermore, eating disorders are less common in sports that use referees as opposed to sports that use judges to gauge competition (Baum, 2006; Zucker, Womble, Williamson, & Perrin, 1999).

**Overall well-being.** Compared to non-athletes, college athletes are at a greater risk for many psychosocial challenges. It should come as no surprise that an increase in the likelihood of experiencing a psychosocial risk results in lower levels of overall well-being (Chatzisarantis & Hagger, 2007; Watson & Kissinger, 2007). Myers, Sweeney, & Witmer (2000) defined well-being as, “a way of life oriented toward optional health and

safety in which the body and mind are integrated by the individual to live more fully” (p. 252).

Research shows that participation in college athletics can be harmful to the life aspirations of a college athlete (Chatzisarantis & Hagger, 2007). It is not until five to ten years after their college career that some college athletes begin to realize the positive aspects that athletic participation brought to their lives (e.g., leadership development, teamwork, and vigorous physical activity). Watson and Kissinger (2007) found that 15% of college athletes face adjustment challenges (e.g., development of meaningful social relationships and sense of self-worth outside of athletics) after college compared to 9% of non-athletes.

Challenges associated with building a strong social support network and sense of self-worth are likely made more difficult because college athletes believe their identity is only based on their athletic association and feel isolated from the overall campus population (DeFreese & Smith, 2013; Maniar et al., 2005; Miller & Hoffman, 2009). Additionally, for many college athletes, opportunities to interact socially with other students are limited because of demanding athletic schedules (Watson & Kissinger, 2007). In many situations, college athletes spend as much time with athletic obligations as a person would on a full-time job. These demands on time can cause a college athlete to experience social isolation and impact the time they spend thinking about their future career (Stone & Strange, 2000).

**Summary.** The psychosocial challenges impacting college athletes are serious. While not all college athletes attend college for both athletic and academic purposes, a majority of college athletes do attend college to excel both athletically and academically.

Sadly, some of these college athletes are leaving with more than a college degree – they are leaving with psychosocial risks that can have a long-term impact on their adulthood. Specially, college athletes experience setbacks in personal and professional identity formation (Hamrick, Evans, & Schuh, 2002), which might result in mental health challenges and the use of unhealthy coping mechanisms. Having college athletes leave with psychosocial risks as a result of their athletic participation goes strongly against the vision and mission of every college athletic department and the NCAA. Therefore, these entities have plans for promoting college athlete safety and well-being. The question becomes whether or not these plans are adequate for meeting the unique needs of college athletes and the full spectrum of risks that athletic participation leaves college athletes susceptible to developing.

### **Limitations of Current Literature**

While research indicates that college athletes face psychosocial challenges as a result of their athletic participation, these studies do not come without their limitations. Many of these studies have limitations in their sampling approach, measurement tools, and statistical findings.

Several of the studies cited in the literature review use a convenience sample (Armstrong & Oomen-Early, 2009; Brenner & Swanik, 2007; Miller & Hoffman, 2009; Yusko et al., 2008). These studies collected data from one college or university located near the researcher(s). Thus, the generalizability of the findings is limited. Selection-bias was also common in the research (Miller & Hoffman, 2009). For example, Miller and Hoffman (2009) intentionally oversampled college athletes of ethnic/racial minority, which biased their results. Many of the studies also had small sample sizes, which

provided little statistical power for the findings (Greenleaf et al., 2009; Williams et al., 2008). This research addressed many of these limitations with the use of a national random sample and a larger sample size than many previous research studies.

In addition to limitations with the study samples, many of the research studies relied on self-report and retrospective measurement tools (Ford, 2007a; Greenleaf et al., 2009; Yusko et al., 2008). When asking college athletes to self-report or retrospectively recall information, there is no way to guarantee that the information is accurate. Many of the researchers cited, believe if anything, that college athletes underreported prevalence rates of psychosocial risks out of fear that their information would become public to their coaching staff (Ford, 2007a; Greenleaf et al., 2009; Yusko et al., 2008). There are also concerns with the reliability and validity of the self-made surveys used for data collection (Williams et al., 2008).

There were also imitations with the statistical findings of the research studies. Despite small sample sizes, many of these studies do find statistical differences between college athletes and non-athletes. However, these studies have only small to moderate effect sizes (Armstrong & Oomen-Early, 2009; Watson & Kissinger, 2007; Yusko et al., 2008). The lack of large effect sizes is concerning as it is challenging to estimate the true relationship between variables.

Another potential limitation not mentioned in the actual literature is the comparison of college athletes with non-athletes. There are potential concerns that these groups are not comparable with one another. Yes, college athletes and non-athletes are both at risk for developing similar psychosocial risks (Armstrong & Oomen-Early, 2009). However, the reasons why these college athletes experience psychosocial risks are

different between the two groups (Harrison, 1981; Maniar et al., 2005; Remer et al., 1978; Watson & Kissinger, 2007). For example, the psychosocial risks developed by a college athlete might occur as a result of stress with managing the dual roles of being a college and a student (Potuto & O'Hanlon, 2007). College athletes frequently report that they spend more time with athletic engagements than they do with their academics. Additionally, approximately 60% of college athletes view themselves more as college athletes than students, which makes it harder for them to develop social relationships outside of their sport, to participate in other campus-wide organizations, and to attend campus sponsored events (Potuto & O'Hanlon, 2007). This lack of belongingness and perception of being a college athlete before a student poses serious risks to college athletes. Understanding these differences, one might conclude that each of these groups is going to have separate needs, which might require a different approach to service delivery. This research did not compare the responses of college athletes to the general college population; rather, emphasis was placed on directly improving the psychosocial well-being of college athletes.

Despite these limitations, there is still consistent evidence that participation in athletics is a risk factor for the development of a psychosocial risk. Both the NCAA and colleges and universities understand this fact and do take steps to remedy the problems.

### **The Current Approach to Athletic Support Services**

The NCAA does have recommendations for assessing mental health, suicidality, alcohol abuse, substance abuse, eating disorders, and lack of well-being of college athletes (NCAA, 2013b). These recommendations include referring college athletes for psychosocial evaluation and care, addressing psychosocial risks during pre-participation

examinations, establishing standards for approaching college athletes with a psychosocial risk, scheduling routine evaluations to assess a college athlete's total well-being, establishing standards for submitting outside referrals for severe cases, and educating college athletes about potential psychosocial risks, amongst other recommendations (NCAA, 2013a). While these recommendations are in place, the strategic plan for how to implement these recommendations is in its infancy. Additionally, there are no clear details for how the NCAA will ensure all colleges and universities follow through with these recommendations.

Another formal NCAA policy that has a relation to psychosocial development is in regards to drug-testing. The NCAA drug randomly tests approximately 13,500 college athletes from various schools and sports each year (NCAA, 2013a). The penalty for positive tests of both performance-enhancing and street drugs is strict and automatic. College athletes lose one full year of eligibility for the first offense (25% of their total eligibility) and are withheld from competition for a full season. A second positive test for street drugs results in another lost year of eligibility and year withheld from competition. A second positive result for PED usage will render the college athlete permanently ineligible (NCAA, 2013a). Unfortunately, this policy does not mention aspects of assessment and intervention to address underlying needs. This policy might also shed insight into why college athletes do not disclose substance abuse risks – the policy appears more punitive than recovery-focused. In addition to the punitive framework, drug-testing costs 4.5 million dollars annually, which averages out to over \$300 per test (NCAA, 2013a). Some of this 4.5 million dollars might be better served on new ideas for assessing and treating those with substance abuse problems.



To implement current recommendations and policies, the NCAA allows each school's athletic department to determine how best to meet the psychosocial needs of their college athletes. Standard services available to college athletes include academic advising, academic tutoring, athletic training, career development, general campus counseling, medical services, and in some cases sport psychology and nutrition services (Gill, 2008). Sport psychology and nutrition services are generally seen only at the Division I level. All NCAA affiliated schools also require college athletes to attend a Life Skills Program (NCAA, 2013a). This is a half-day program that spends a portion of the time educating college athletes about potential psychosocial risks (e.g., substance abuse and alcohol). Studies show mixed results on the effectiveness of this program. Goddard (2004) found the program to be effective at helping college athletes make appropriate choices throughout their college career. Rasnack (2014) found that participation in the program did not have an impact of the decisions made by college athletes.

Additionally, the NCAA recently developed a Sport Science Institute. The Sport Science Institute is the NCAA's new national center for excellence for the study and improvement of health and safety in college athletics (NCAA, 2013b). The Sport Science Institute is devoted to research, education, collaboration, policy development, and best practice guidelines that will benefit college athlete safety and well-being (NCAA, 2013b). It is still too early to tell the true impact that this institute will have on rates of psychosocial risks.

While these services certainly contribute to a college athlete's safety and well-being, these services could do more or be better utilized to assess and intervene when a

college athlete is struggling with a psychosocial risk (Gill, 2008). Specifically, these NCAA programs do not account for the fact that many athletic programs do not have the formal alcohol abuse prevention and treatment services, mental health services, substance abuse prevention and treatment services, and suicide prevention services needed to address the underlying needs of college athletes (Gill, 2014).

Currently, athletic departments rely on sports psychologists (when available), athletic trainers, and general campus counseling to address the psychosocial challenges discussed (Gill, 2009). Athletic trainers in particular are often the front line individuals dealing with a college athlete's psychosocial challenges, but for many athletic trainers this is practicing outside of their area of competency (NCAA, 2013a, Neal et al., 2013). Additionally, sports psychologists primarily work with college athletes to help them overcome the psychological factors impacting performance, and do not address the psychosocial risks associated with athletic involvement (Fletcher, Rumbold, Tester, & Coombes, 2011). General campus counseling services can offer assessment and intervention strategies to college athletes. However, services offered by a campus counseling center are typically session-limited (maximum of five counseling sessions per person), which might prematurely force college athletes out of services (Gill, 2008; Stone & McMichael, 1996; Watson, 2006). Thus, there is a need for a helping professional who advocates for increased safety and well-being, especially when research shows that college athletes are not likely to seek services on their own, and instead employ avoidant coping strategies (Anshel et al., 2010).

This research sought to further explore many of the challenges discussed throughout this literature review. In particular, this research explored the current need for

services, the availability of services, a college athlete's comfort with seeking services, and the barriers that prevent a college athlete from getting the help he or she might need. The answers to these questions might shed light on what researchers and school officials can do to help college athletes.

### **Gaps in Current Research**

It is nearly impossible to turn on ESPN or other sporting channels and not hear a story about a college athlete who is catching media attention for some form of psychosocial challenge. As commentators speculate about possible suspensions and how these behaviors impact a team or an entire university, little, if any discussion, is directed at the college athlete getting the help he or she needs. Research of this nature intends to shift the debate from the impact a psychosocial risk has on game day and instead, focus on how psychosocial risks can lead a college athlete down a hopeless road.

This research builds off the great work of many researchers, but places a much larger emphasis on service need, service availability, and comfort with seeking services. In other words, instead of focusing on the percentage of college athletes with a psychosocial risk, this research looked more closely on where service structure can improve to actually address underlying needs.

Research on the psychosocial risks of college athletes and the services necessary to prevent and treat such risks is limited. In particular, there are a limited number of studies that look at the comfort level that college athletes have with seeking psychosocial services. Few studies also look at the barriers that might prevent a college athlete from receiving services in the first place. While research indicates that college athletes are less likely to have a positive attitude towards seeking help than non-athletes (Gulliver,

Griffiths, & Christensen, 2012; Watson, 2005), it is not entirely clear what barriers lead to these research findings.

One potential barrier is poor mental health literacy, which includes college athletes who are unsure where to access help, who cannot distinguish between normal and abnormal distress, and who are unaware of all available services (Gulliver et al., 2012; Kelly, Jorm, & Wright, 2007). A second barrier is attitudes and personal characteristics, which include a college athlete's lack of confidence in helping professionals, preconceived ideas about how others will view the problem (e.g., coaches, administrators, and teammates), and concerns that seeking help will only hurt athletic performance (Gulliver et al., 2012; Jorm, Wright, & Morgan, 2007; Lopez & Levy, 2013). A third type of barrier is stigma, which includes a college athlete's concerns over privacy and confidentiality and feelings of weakness (Lopez & Levy, 2013; Maniar, Curry, Sommers-Flanagan, & Walsh, 2001; Watson, 2005). The final type of barrier is practical challenges that a college athlete might face such as limited free time and services not being available when there is free time (Lopez & Levy, 2013; Maniar et al., 2001; Watson, 2005).

College athletes believe in order for them to accept psychosocial help the following must exist: having an individual associated with an athletic department providing the help and having a helping professional who has knowledge of athletics (previous college playing experience preferred) (Lopez & Levy, 2013). Conversely, research has identified a number of possible facilitators of help-seeking, which includes emotional competence, mental health literacy, positive attitudes towards seek professional help, positive past experiences, social encouragement, and the increased

availability of professional help (Gulliver et al., 2012; Jorm et al., 2007; Kelly et al., 2007).

In addition to the limited information known about barriers to seeking services, there is also limited information about the current availability of athletic, academic, and psychosocial services at colleges and universities (Beauchemin, 2014). In particular, there is limited information about whether or not psychosocial services are as readily available as athletic and academic services.

This research also explores how specific factors such as competition level and profile of sport influence a college athlete's perception of services and the disclosure of psychosocial risks. This is vital as research clearly shows that competition level and profile of sport are potential predictive factors in the development of a psychosocial risk (Brenner & Swanik, 2007; Ford, 2007b; Green, 2001). For example, Division I college athletes have larger concerns about scholarship eligibility, the possibility of playing their sport at the professional level, and have greater pressure from coaches, teammates, and the media than do Division II and III college athletes (Brenner & Swanik, 2007). This potentially could make Division I college athletes less likely to seek help for services. The same is potentially true for college athletes from high profile sports (e.g., football and basketball). College athletes in these sports also receive more media attention and attention from the overall campus population. These pressures could result in a college athlete feeling like it is less acceptable to seek help for a psychosocial risk. As stated earlier, there are also other confounding variables that could influence the perceptions of college athletes and athletic directors. These confounding variables warrant attention in future research studies.

Furthermore, this research study gains perspectives from athletic directors. Research that includes athletic directors is scarce but essential as these individuals have a large voice in the programs that impact college athletes on a daily basis. Athletic directors have the ear of other university administrators and hold significant power in controlling budgets. Therefore, if found that athletic directors perceive a need for psychosocial services and/or feel these services are not available, athletic directors might support new programs within their departments to promote college athlete safety and well-being. A recent study of athletic director's perceptions towards psychological services found that athletic director's believe performance-related services were more important than life-related services (Wrisberg, Withycombe, Simpson, Loberg, & Reed, 2012). This research explored whether these perceptions remain consistent.

One final gap that this research filled is the lack of research on new prevention and treatment models for ensuring college athlete well-being. While there is evidence illustrating that current approaches to helping college athletes overcome psychosocial challenges are not causing a decline in the overall rate of risk development (Gill, 2008), there is minimal research exploring how best to restructure or change existing approaches. The new approaches that are discussed in the literature involve integrative outreach models (Beauchemin, 2014), which call for partnerships between mental health professionals, sport psychologists, and counseling centers. Another new approach is ensuring that athletic trainers and other professionals who spend time around college athletes receive advanced training on recognizing and referring college athletes for psychosocial help (Neal et al., 2013). A final approach is creating a career exploration

course for all college athletes to ensure they are dedicating time to their ambitions after their playing days conclude (Foster, 2014).

If it is found through this research that needed services are not available or college athletes feel it is not appropriate to accept services, athletic departments and the NCAA might need fresh perspectives like those listed above and the Athletic Well-being Model discussed later in this research for promoting a college athlete's total well-being.

Additionally, these new perspectives must take into account characteristics of college athletes, such as their level of competition and the demands of their specific sport.

Knowing that each college athlete experiences their athletic involvement differently, service structures must be adaptable to individual circumstances.

## **CHAPTER THREE – METHODS**

### **Research Questions**

Knowing that athletic directors have a large voice in how support services are structured, this study drew comparison between athletic directors' perceptions and the perceptions of college athletes as it related to the need and availability of athletic, academic, and psychosocial services. Exploring the similarities and differences between these two groups will help researchers gain insight on the current landscape of college athletics. Particularly, this research could illustrate whether or not there are gaps in current perceptions and how these gaps could impact future advancements in ensuring the all-around safety and well-being of college athletes.

The first two research questions pertained to athletic directors' and college athletes' perceived needs for support services. First, are there significant differences between a college athletic director's perception of the current need for athletic, academic, and psychosocial services based on their NCAA division membership? Second, are there significant differences in a college athlete's perceived need for athletic, academic, and psychosocial services based on their NCAA division membership and profile of sport?

The next two research questions focused on the availability of current support services. First, are there significant differences between a college athletic director's perception of the availability of athletic, academic, and psychosocial services based on their NCAA division membership? Second, are there significant differences between a college athlete's perception of the availability of athletic, academic, and psychosocial services based on their NCAA division membership?



The final two research questions focused solely on college athletes' responses to additional questions. The fifth research question explored college athletes' levels of comfort with seeking services. In particular, are there significant differences between a college athlete's comfort in seeking athletic, academic, and psychosocial services based on their NCAA division membership and the profile of their sport?

The final research question focused on current barriers preventing college athletes from seeking necessary services. In particular, are there significant differences in a college athlete's perception of current barriers to seeking services based on their NCAA division membership and profile of sport? Barrier information was also gathered from athletic directors, but was used only for descriptive purposes. The researcher elected to primarily focus on a college athlete's perception of barriers, as college athletes are the individuals seeking services and their perceptions speak to the true reality of the challenges they face. While the perceptions of athletic directors are important, they are not the individuals experiencing athletic, academic, and psychosocial risks; therefore, the current research focused on the athletes' perceptions. See Table 1 for a complete list of research questions.

It is time for researchers to shift their attention from the prevalence of psychosocial risks and focus on what can be done to ensure these risks do not become debilitating aspects of a college athlete's life. The best way to do this is through the design of valid and reliable quantitative studies (Rubin & Babbie, 2011; Thomas, Nelson, & Silverman, 2011). This research is the starting point for developing such studies and could go a long way in ensuring that college athletes are able to maximize their performance athletically, academically, and as global citizens.

Table 1.

*Research Questions, Variables, and Statistical Tests*

Research Question	IV	DV	Statistical Test
RQ1: Are there significant differences between a college athletic director's perception of the current need for athletic, academic, and psychosocial services based on their NCAA division membership?	NCAA Division Membership	Composite Scores for Current Service Needs for (1) Athletic Services, (2) Academic Services, and (3) Psychosocial Services	MANOVA
RQ2: Are there significant differences in a college athlete's perceived need for athletic, academic, and psychosocial services based on their NCAA division membership and profile of sport?	NCAA Division Membership Profile of Sport	Composite Scores for Current Service Needs for (1) Athletic Services, (2) Academic Services, and (3) Psychosocial Services	MANOVA
RQ3: Are there significant differences between a college athletic director's perception of the availability of athletic, academic, and psychosocial services based on their NCAA division membership?	NCAA Division Membership	Composite Scores for Availability of (1) Athletic Services, (2) Academic Services, and (3) Psychosocial Services	MANOVA
RQ4: Are there significant differences between a college athlete's perception of the availability of athletic, academic, and psychosocial services based on their NCAA division membership?	NCAA Division Membership	Composite Scores for Availability of (1) Athletic Services, (2) Academic Services, and (3) Psychosocial Services	MANOVA
RQ5: Are there significant differences between a college athlete's comfort in seeking athletic, academic, and psychosocial services based on their NCAA division membership and the profile of their sport?	NCAA Division Membership Profile of Sport	Composite Scores for Comfort Seeking (1) Athletic Services, (2) Academic Services, and (3) Psychosocial Services	MANOVA
RQ6: Are there significant differences in a college athlete's perception of current barriers to seeking services based on their NCAA division membership and profile of sport.	NCAA Division Membership Profile of Sport	Composite Score for Barriers	Two-way ANOVA

## Research Design

For this exploratory study, the researcher used a cross-sectional, web-based survey design to collect information from athletic directors and college athletes at the selected NCAA affiliated colleges or universities.

To determine the desired sample size, the researcher began by selecting the statistical tests necessary to answer the research questions (See Table 1). The researcher used a Multivariate Analysis of Variance (MANOVA) for research questions one through five. A two-way Analysis of Variance (ANOVA) was used for research question six. The researcher used the same dataset for the four research questions pertaining to college athletes, which required a correction to the significance level ( $\alpha < 0.0125$ ). The researcher used Bonferoni's Correction for Inequality to arrive at this significance level (Abu-Bader, 2011). For the two questions pertaining to athletic directors, which also used the same dataset, the research used an adjusted significance level of 0.025. This researcher also used a statistical power of 0.80 and a medium effect size (Dattalo, 2008; Lenth, 2001). With the lack of existing research to build a theoretical framework, the researcher used a medium as opposed to small or large effect size. The researcher used confidence intervals of 0.05, which were liberal rather than accurate estimates. Considering these factors, the desired sample size for this study was a minimum of 98 athletic directors and 249 college athletes (Faul, Erdfelder, Lang, & Buchner, 2007). These were the largest sample sizes needed for any of the statistical tests based on the number of groups and variables. The final sample included 132 athletic directors and 349 athletes. With the final sample size, the statistical power for each research question exceeded 0.8 (Faul et al., 2007).

In order to obtain the desired number of responses from athletic directors and college athletes, the researcher randomly selected 474 colleges or universities. The researcher predicted that only 10-15% of athletic directors would respond to the web-based survey. This anticipated response rate is consistent with many studies using web-based surveys (Hoonakker & Carayon, 2009; Munoz-Leiva, Sanchez-Fernandez, Montoro-Rios, & Ibanez-Zapata, 2010). It was difficult to anticipate the number of college athlete responses for this study. First, multiple college athletes could respond from each college or university. Second, it was unknown to the researcher how many college athletes would receive a copy of the survey since athletic directors were responsible for asking their athletes to participate.

The researcher used publicly available and complete lists of colleges and universities from the NCAA (2012) to conduct a proportionate stratified random sampling strategy. The researcher used division membership to identify three strata (Division I, II, and III). There is a total of 1,108 NCAA affiliated programs. Each college or university belongs to only one division level. Nationwide, there are 349 Division I programs (31%), 316 Division II programs (29%), and 443 Division III programs (40%) (NCAA, 2012). The researcher used a table of random numbers, in accordance with the desired sample size (Rubin & Babbie, 2011), to select 146 Division I programs, 138 Division II programs, and 190 Division III programs to participate in the study.

Once the researcher used stratified random sampling techniques to identify 474 colleges or universities, the researcher used the school's website to obtain the contact information (name and email address) for the athletic director. When contact information

was not accurate or unavailable for an athletic director, the researcher contacted the college or university personally to obtain updated information.

Athletic directors completed one version of a web-based survey for their college or university as they are responsible for overseeing all aspects of college athletics. The researcher asked that the athletic director pass along the link for a web-based survey, a cover letter, and a study information sheet to his or her college athletes for completion. To avoid potential selection bias, the researcher asked the athletic director to send the survey to all college athletes competing at their university.

### **Study Participants**

**Athletic directors.** Of the 474 athletic directors contacted, 132 participated in the study (28% response rate).

The researcher collected information about age, gender, race, education level, years in current position, years in administration, and NCAA division membership for each athletic director (see Table 2). The age range for this sample was 27-70 years ( $M = 49.90$ ). Male athletic directors accounted for 69% of the total sample. A majority of the athletic directors identified as white (94%). The largest percentage of athletic directors had a Master degree (68%). Athletic directors ranged in their time at their current position from 0-35 years ( $M = 8.32$ , Median = 5). The average length of time spent in athletic administration was 22.43 years (Median = 23), ranging from 1-41 years. The largest percentage of athletic directors worked at the Division II level (36%).

Table 2.

*Athletic Director Demographics (N = 132)*

Demographic Characteristic	N	%
Age ( <i>M, SD</i> )	49.90 (9.96)	
Years in Current Position ( <i>M/Median, SD</i> )	8.32/5 (7.99)	
Years in Administration ( <i>M/Median, SD</i> )	22.43/23 (10.12)	
Race		
White	124	94%
Black	6	5%
Multi-racial	2	1%
Education Level		
Bachelor	19	14%
Master	90	68%
Doctorate	21	16%
No Four Year Degree	2	2%
NCAA Division Membership		
Division I	38	29%
Division II	48	36%
Division III	46	35%

The researcher also gathered basic information about each college or university, which included enrollment size, religious affiliation, and whether there was an affiliation as a HBCU. Enrollment size ranged from 570-30,000 students ( $M = 6,580$ , Median = 2,624). Approximately 59% of respondents worked at a college or university with a religious affiliation. The most common religious affiliations were Methodist (11%) and Catholic (10%). Five (4%) of the athletic directors worked for a HBCU.

**College athletes.** The researcher collected information about the age, gender, race, class standing, number of years playing college athletics, sport played, NCAA division membership, and profile of sport for the 349 college athletes that participated in the study (see Table 3). The age range for this sample was 18-25 years ( $M = 19.44$ ). Female college athletes accounted for 55% of the total sample. A majority of the college athletes identified as white (74%). Thirty percent of the respondents were sophomores in

college. Approximately 45% of college athletes were in their first year of competing in college athletics. The largest percentage of college athletes competed at the Division III level (39%). Over half of the college athletes (56%) identified their sport to be low profile. College athletes from this sample competed in 18 different sports (See Table 4). The most popular sports played were soccer, basketball, football, and softball.

Table 3.

*College Athlete Demographics (N = 349)*

Demographic Characteristic	N	%
Age (M, SD)	19.44 (1.26)	
Gender		
Male	157	45%
Female	192	55%
Race		
White	259	74%
Black	45	13%
Multi-racial	32	9%
Asian	7	2%
American Indian	5	1%
Pacific Islander	1	<1%
Class Standing		
Freshman	94	27%
Sophomore	104	30%
Junior	76	22%
Senior	75	21%
Years Playing Collegiately		
First Year	157	45%
Second Year	91	26%
Third Year	71	20%
Fourth Year	30	9%
NCAA Division Membership		
Division I	93	27%
Division II	120	34%
Division III	136	39%
Profile of Sport		
High	152	44%
Low	197	56%

Table 4.

*College Sports Played (N = 349)*

Sport	Number of College Athletes	%
Soccer	48	14%
Basketball	44	13%
Football	37	11%
Softball	37	11%
Volleyball	29	8%
Lacrosse	28	8%
Cross Country	24	7%
Swimming	20	6%
Baseball	18	5%
Tennis	17	5%
Track and Field	15	4%
Golf	10	3%
Cheerleading	9	3%
Hockey	4	1%
Water Polo	4	1%
Diving	3	<1%
Bowling	1	<1%
Rowing	1	<1%

**Measures/Instruments**

**Development of survey questionnaire.** The researcher was not able to locate previously validated surveys for this study. Thus, the researcher developed a new survey questionnaire for athletic directors and for college athletes.

The researcher provided a copy of both draft surveys to faculty members in the Department of Kinesiology at Indiana University or the School of Social Work at Indiana University. Furthermore, the researcher provided the draft survey to a panel of five experts in the field of college athletics for their review and feedback of the survey's readability, content, length, and face validity. The panel consisted of an assistant college athletic director, a current college coach, an academic advisor who works with college



athletes, one former college athlete, and one current college athlete. All of these individuals worked for or attended colleges or universities located across the Midwest. The researcher incorporated subsequent feedback into the final survey, which included the restructuring of certain survey items.

The researcher tested for internal consistency of the questionnaires by using Cronbach's  $\alpha$ . The athletic director questionnaire had three sections (service need, service availability, and barriers). All three sections had high reliability (Cronbach's  $\alpha$  for Service Need = 0.84; Cronbach's  $\alpha$  for Service Availability = 0.88; Cronbach's  $\alpha$  for Barriers = 0.88). The college athlete questionnaire had four sections (service need, service availability, comfort with seeking services, and barriers). All four sections had high reliability (Cronbach's  $\alpha$  for Service Need = 0.85; Cronbach's  $\alpha$  for Service Availability = 0.92; Cronbach's  $\alpha$  for Comfort = 0.91; Cronbach's  $\alpha$  for Barriers = 0.91). These results support that the various items measuring the constructs delivered consistent scores. Additional information about the reliability and validity of these surveys is unknown.

**Athletic director survey.** This survey had three major sections: service need, service availability, and service barriers (see Appendix A). Questions about service need and service availability were related to nine support services, which were further broken down into three distinct categories. First, athletic services included athletic training and medical services. Second, academic services included academic advising, career development, and tutoring services. Third, psychosocial services included mental health services, substance abuse services, alcohol addiction services, and suicide prevention.

Regarding service need, athletic directors were asked to indicate to what extent they think each of nine support services are needed by college athletes. This question used a nine-point Likert scale ranging from “0 = Not at All” to “8 = A Great Deal.”

Regarding service availability, athletic directors responded to how available each of the nine support services are to their college athletes on a nine-point Likert scale (“0 = Never” to “8 = All the Time”).

Three open-ended questions provided athletic directors the opportunity to further share information about services. First, athletic directors were asked to share what other services they believe their college athletes might benefit from receiving. Second, athletic directors were asked to indicate what other services a college athlete might need that are not currently available on their campus. Third, athletic directors were asked to report what informal supports college athletes receive when facing personal challenges.

The final section asked athletic directors about barriers to receiving services. Athletic directors were asked to report to what extent certain barriers influence whether or not a college athlete seeks necessary services. This question used a nine-point Likert scale, ranging from “0 = Not at All” to “8 = A Great Deal.” See Table 9 for a complete list of the 13 barriers.

**College athlete survey.** This survey had four major sections: service need, service availability, comfort with seeking services, and service barriers (see Appendix B). Questions about service need, service availability, and comfort with seeking services included the same list of services used in the athletic director survey.

Regarding service need, college athletes were asked to indicate to what extent they currently need each of nine support services. This question used a nine-point Likert

scale ranging from “0 = Not at All” to “8 = A Great Deal.” Regarding service availability, college athletes were asked when needed, how available are each of the nine support services on their campus (“0 = Never” to “8 = All the Time”). College athletes were able to respond to one open-ended question about services. The question asked what are the two or three other services that would be beneficial to helping a college athlete meet their own needs.

College athletes also responded to an additional section about their comfort level with seeking services. They were asked to indicate how comfortable they feel seeking each of nine services on a nine-point Likert scale (“0 = Not at All” to “8 = A Great Deal”).

Like athletic directors, college athletes also answered questions about barriers to receiving services. College athletes were asked to report to what extent each of 13 barriers influence whether or not they seek necessary services. This question used a nine-point Likert scale, ranging from “0 = Not at All” to “8 = A Great Deal.” College athletes responded to open-ended questions that provided additional information about service barriers. These questions asked what other obstacles or issues do college athletes think prevent them from seeking help and what athletes think would be helpful to overcome identified obstacles.

**Demographics.** All study participants answered questions about their age (years), gender, ethnicity, and NCAA division membership. Athletic directors identified the time spent in their current position (years), time spent working in college athletics (years), and their highest level of education. The researcher also asked athletic directors to identify their college or university enrollment size, religious affiliation (if applicable),

and whether they worked for a HBCU. College athletes had to identify the sport(s) they played, the profile of their sport, class standing, and the number of years they have competed in college athletics.

### **Data Collection**

Prior to participation in the study, the researcher emailed all athletic directors a pre-notification letter. The pre-notification letter (see Appendix C) introduced the basics of the research study and provided details regarding when athletic directors would receive instructions for completing the web-based survey and what information they would pass along to their college athletes.

One week after emailing the pre-notification letter, the researcher emailed each athletic director a research packet. The research packet included the study information sheet (See Appendix D), an athletic director cover letter (See Appendix E), and a college athlete cover letter (See Appendix F). The study information sheet reintroduced the basics of the study, provided clear directions for the study, discussed the anonymity of the study, provided contact information for the researcher, and emphasized the voluntary nature of the study. The researcher upheld the anonymity of athletic directors and college athletes as the web-based survey did not ask for any identifying information about the participants or the college or university they represent.

The cover letter focused on the significance of the research, the importance of participating in the study, information about the length of the survey, and how to access the survey online. The athletic director cover letter provided details about what to pass along to their college athletes (the college athlete cover letter and the study information sheet). Once participants opened their respective web link for the survey, they received

thorough instructions for completing each section. The researcher used Qualtrics™ (2012) to post the survey and collect data.

After sending out the initial research packet, the researcher sent a series of follow-up emails to all athletic directors (See Appendix G). These emails provided athletic directors with instructions for forwarding information to their college athletes. The researcher sent a follow-up email once every two weeks for three months. The follow-up emails thanked those who already completed the study and re-emphasized the importance of the research. The final follow-up email provided a deadline for completing the survey. Data collection took place between June and August of 2014.

### **Data Analysis**

There were two independent variables in this study. The first independent variable was NCAA division membership (I, II, or III). This variable was categorical. NCAA division membership was an independent variable in all six research questions. The second independent variable was the profile of the college athlete's sport (high or low). College athletes self-identified whether or not they believed their sport was high or low profile. The researcher informed college athletes that high profile referred to sports with geographic importance, strong fan support, increased media attention and/or higher rates of athletic department funding (Ford, 2007b). This variable was also categorical. The profile of an athlete's sport was only a variable in the second, fifth, and sixth research questions pertaining to current service need, comfort seeking services, and barriers identified by college athletes. This variable was not needed to determine the availability of support services as the availability of services related solely to NCAA division membership.

There were multiple dependent variables for this study. For the first five research questions, the researcher created composite (sum) scores. The researcher calculated three composite scores for each type of service need: athletic, academic and psychosocial services. Similarly, the researcher created three composite scores for availability of each type of support service. Separate composite scores for service need and service availability were calculated for athletic directors and athletes. The researcher also calculated three composite scores for an athlete's comfort in seeking athletic, academic, and psychosocial services. The final research question used a composite score from athlete responses about the 13 barriers. See Table 1 for a list of the dependent variables associated with each research question. All composite scores were measured at the interval level.

The researcher used descriptive statistics to provide details about the sample and an overview of the survey results. The descriptive statistics also allowed the researcher to compare athletic directors' perceptions to college athletes' perceptions in regards to service need, availability, and barriers. The researcher used SPSS 21.0 for Windows to complete these statistical tests.

The first five research questions used a MANOVA. These tests allowed the researcher to examine the mean differences between levels of the independent variable(s) on three dependent variables related to each question (Abu-Bader, 2011). The dependent variables were the composite scores for athletic services, academic services, and psychosocial services. The use of MANOVAs not only protected the inflation of type I error, but also allowed the researcher to examine group differences on each dependent variable, as well as group differences on the combined construct (Field, 2009).

The sixth research question used a two-way ANOVA. This test allowed the researcher to examine the differences between the mean scores of one continuous variable (composite score for barriers influencing whether a college athlete seeks necessary services) based on two categorical variables (NCAA division membership and profile of sport) and whether these differences were statistically significant (Abu-Bader, 2011). By examining both independent variables simultaneously, the researcher was able to control for the effect of one independent variable (NCAA division membership) over the second independent variable (profile of sport). Furthermore, the researcher was able to not only examine the effect of each independent variable on the dependent variable (main effects), but also whether there were significant interaction effects between all variables (Field, 2009).

## CHAPTER FOUR – RESULTS

This study sought to answer six research questions related to the safety and well-being of college athletes. This chapter provides general descriptive information about the data collected. These descriptive statistics provide the opportunity for a side-by-side comparison of athletic director and college athlete perceptions. Following the descriptive information are results of the statistical tests for each of the six research questions.

### **Descriptive Statistics**

**Services currently needed by college athletes.** The researcher asked athletic directors what services are currently needed by their college athletes. Overall, the most commonly identified services were those related to athletic participation. Academic services were the next most needed. Psychosocial services were viewed as the least needed support services.

The researcher also asked college athletes what services they currently needed. Similar to the perceptions of athletic directors, the most commonly identified services were those related to athletic participation, followed by academic services. Psychosocial services were rated as the least needed support services by college athletes (see Table 5). College athletes rated all services as being less needed than athletic directors. Athletes' scores ranged from 1.22 to 5.96 (overall mean = 3.42), while the directors' scores ranged from 5.18 to 7.52 (overall mean = 6.41). This research also found that a percentage of college athletes still identified a moderate to severe need for academic and psychosocial services (See Table 6). For example, 26% of college athlete respondents indicated they had a moderate to severe need for mental health services.



Table 5.

*Service Needs: Athletic Directors and College Athletes*

Service	Athletic Director (N= 132) <i>M (SD)</i>	College Athlete (N= 349) <i>M (SD)</i>
Athletic Training	7.52 (1.04)	5.96 (2.07)
Medical Services	7.09 (1.29)	4.80 (2.69)
Academic Advising	6.98 (1.61)	4.42 (2.49)
Tutoring Services	6.89 (1.58)	4.01 (2.68)
Career Development	6.70 (1.34)	5.08 (2.29)
Mental Health Services	6.08 (1.56)	2.64 (2.64)
Alcohol Addiction Services	5.71 (1.64)	1.45 (2.13)
Substance Abuse Services	5.58 (1.62)	1.24 (2.03)
Suicide Prevention	5.18 (1.84)	1.22 (2.03)

Note: Respondents were asked to indicate service needs on a nine-point scale (0 = Not at All to 8 = All the Time)

Table 6.

*Number of College Athletes with Moderate to Severe Academic and Psychosocial Needs*

Service Type	Score = 5 (N) (Moderate)	Score = 6 (N)	Score = 7 (N)	Score = 8 (N) (Severe)	Total N (% out of 349 total athletes)
Career Development	52	57	45	62	217 (62%)
Academic Advising	35	66	29	46	176 (50%)
Tutoring Services	34	51	28	44	157 (45%)
Mental Health Services	22	33	17	19	91 (26%)
Alcohol Addiction Services	13	13	5	7	38 (11%)
Substance Abuse Services	10	11	2	8	31 (9%)
Suicide Prevention	9	10	8	5	31 (9%)

Both athletic directors and college athletes were given the opportunity to identify other services they felt would be beneficial. These open-ended questions were optional for participants to complete. There were many services that both athletic directors and college athletes thought would be beneficial (e.g., financial planning, time management, leadership development, team building, etc.). Thirty athletic directors and 25 college

athletes responded to this open-ended question. See Table 7 for a breakdown of the additional services identified. The information in this table might be worth further exploration for future program development within college athletic departments.

Table 7.

*Other Services that would benefit College Athletes*

Service	Athletic Director ( $N = 30$ )	College Athlete ( $N = 25$ )
Financial Planning	8	3
Time Management	5	2
Peer Mentoring	4	-
Leadership Development	4	2
Life Skills Training	3	-
Sexual Assault Training	3	1
Culture and Diversity Training	3	2
Team Building Activities	2	5
Strength and Conditioning	2	7
Bystander Intervention	2	-
Social Media Education	1	-
On-campus Student Employment	-	3
Larger Meal Plans	-	6

**Availability of support services.** The researcher asked athletic directors and college athletes to rate the current level of availability of athletic, academic, and psychosocial services on their campus (see Table 8). Athletic directors and college athletes both identified athletic and academic services to be the most readily available services on their campus. The services that athletic directors and college athletes perceived as being the least available were the psychosocial services. Overall, college athletes (overall mean = 5.38) viewed all services as being less available than athletic directors (overall mean = 6.24). The results of a  $t$ -test showed a significant difference between these two overall means ( $p = 0.002$ ). This was especially true for psychosocial services as college athletes (overall mean = 4.23) viewed these services as being less available than athletic directors (overall mean = 5.40).

Table 8.

*Availability of Support Services: Perceptions of Athletic Directors and College Athletes*

Service	Athletic Director <i>M (SD)</i>	College Athlete <i>M (SD)</i>
Athletic Training	7.61 (0.75)	6.81 (1.59)
Tutoring Services	6.94 (1.44)	6.38 (2.04)
Academic Advising	6.86 (1.27)	6.66 (1.67)
Medical Services	6.85 (1.49)	5.79 (2.16)
Career Development	6.25 (1.71)	5.93 (2.08)
Mental Health Services	5.65 (1.87)	4.42 (2.38)
Substance Abuse Services	5.49 (1.80)	4.29 (2.33)
Alcohol Addiction Services	5.47 (1.78)	4.28 (2.34)
Suicide Prevention	5.00 (2.21)	3.88 (2.04)

Note: Respondents were asked to indicate service availability on a nine-point scale (0 = Never to 8 = All the Time)

Both athletic directors and college athletes were given the opportunity to identify other services available to college athletes on their campus. Eighty five athletic directors and 11 college athletes responded to this question. See Table 9 for a breakdown of the additional services available to college athletes. Overall, athletic directors reported more frequently that other services existed on their campus as compared to college athletes. There are a couple of key findings within this table. First, athletic directors view internal supports (e.g., coaches, athletic staff, and athletic administrators) as being integral in providing for a college athlete's needs. This raises the question on whether or not these individuals have the competency needed to help a college athlete overcome certain needs, especially those related to psychosocial risks. Second, participation in the CHAMPS Life Skills Program is required of all college athletes. However, only one college athlete identified this as an available service, and no athletic directors identified this program. This is striking as the program is one of the major sponsored programs of the NCAA.

Table 9.

*Other Services Available to College Athletes*

Service	Athletic Director ( <i>N</i> = 85)	College Athlete ( <i>N</i> = 11)
Support from Coaches	26	5
Support from Athletic Staff	24	2
Support from Teammates	13	2
Campus Counseling	13	1
Religious Programs	11	-
Support from Faculty	7	1
Mentoring Programs	5	-
Community Partnerships	3	-
CHAMPS Life Skills Program	-	1

**Comfort level with seeking services.** The researcher asked college athletes if needed, how comfortable they would be with seeking athletic, academic, and psychosocial services. The services that college athletes were most comfortable seeking were those related to athletic and academic success. The services that college athletes felt the least comfortable seeking were all the psychosocial services (See Table 10).

Table 10.

*Comfort with Seeking Support Service: College Athletes*

Service	College Athlete <i>M (SD)</i>
Athletic Training	7.16 (1.37)
Academic Advising	7.06 (1.44)
Career Development	6.70 (1.66)
Medical Services	6.66 (1.75)
Tutoring Services	6.61 (1.78)
Mental Health Services	4.22 (2.53)
Alcohol Addiction Services	3.79 (2.50)
Substance Abuse Services	3.58 (2.55)
Suicide Prevention	3.46 (2.73)

Note: Respondents were asked to indicate their comfort with seeking services on a nine-point scale (0 = Not at All to 8 = A Great Deal)

Of particular interest is the number of college athletes that only felt a little or not at all comfortable with seeking psychosocial services compared to athletic and academic services (See Table 11). This table is alarming as it is likely many of these college athletes would not seek help for a psychosocial risk if needed. More must be done to ensure college athletes know it is acceptable to seek psychosocial services so they will appropriately disclose their needs.

Table 11.

*College Athletes with Little to No Comfort with Seeking Support Services*

Service Type	Score = 0 (N) (No Comfort)	Score = 1 (N)	Score = 2 (N) (Little Comfort)	Total N (% out of 349 total athletes)
Suicide Prevention	72	37	40	149 (43%)
Substance Abuse Services	56	30	47	133 (38%)
Alcohol Addiction Services	49	24	44	117 (33%)
Mental Health Services	40	25	32	97 (28%)
Medical Services	3	3	5	11 (3%)
Tutoring Services	4	3	3	10 (3%)
Career Development	3	2	2	7 (2%)
Academic Advising	2	1	3	6 (2%)
Athletic Training	1	1	2	4 (1%)

**Barriers to receiving services.** The researcher asked athletic directors and college athletes to identify what barriers currently prevent college athletes from seeking necessary services (See Table 12). College athletes (overall mean = 3.61) viewed a lower degree of service barriers than athletic directors (overall mean = 4.67). A *t*-test revealed no significant difference between the two overall means. Overall, both athletic directors and college athletes identified lack of time to seek services and feelings of weakness as being three of the top five barriers. These similarities should be considered when thinking about the current structure and acceptability of support services.

Table 12.

*Barriers to Seeking Services: Athletic Directors and College Athletes*

Barrier	Athletic Director <i>M (SD)</i>	College Athlete <i>M (SD)</i>
Lack of Time to Seek Services	5.29 (1.96)	5.33 (2.14)
Lack of Services during an College Athlete's Free Time	5.14 (1.98)	5.00 (2.26)
Difficulty Finding/Accessing Services	4.48 (2.08)	4.11 (2.30)
Believing that a Person is Weak for Seeking Services	5.66 (2.09)	3.96 (2.84)
Fear that Providers will not Understand the Life of an College Athlete	5.05 (2.08)	3.81 (2.50)
Lack of Knowledge of Available Services	5.31 (2.09)	3.69 (2.36)
Stigma Associated with Receiving Services	5.58 (2.02)	3.66 (2.71)
Fear of Teammates Knowledge	5.42 (2.11)	3.14 (2.51)
Fear of Coaching Staff Knowledge	3.94 (2.26)	3.07 (2.59)
Fear Nobody will Understand	4.64 (2.06)	3.04 (2.47)
Lack of Privacy/Confidentiality	3.06 (2.03)	2.95 (2.49)
Fear Services will have an Impact of Sport Performance	4.22 (1.98)	2.73 (2.49)
Fear of Athletic Director Knowledge	2.95 (2.00)	2.56 (2.44)

Note: Respondents were asked to indicate the influence of each service barrier on a nine-point scale (0 = Not at All to 8 = A Great Deal)

The researcher also provided college athletes the opportunity to voice additional barriers through an open-ended question (See Table 13). Twenty college athletes responded to this question. The fear of disappointing others, loss of scholarship, loss of playing time, and personal pride were the additional barriers most likely to influence whether or not a college athlete seeks services. The researcher also asked college athletes what would help them overcome all the barriers discussed within this research. Forty five college athletes responded to this question. Ideas presented by college athletes included reassurance that seeking help is acceptable ( $N = 30$ ), more free time built into athletic schedules ( $N = 18$ ), a go-to-figure responsible for college athlete well-being ( $N = 17$ ), a resource guide of available services ( $N = 10$ ), the ability to make appointments for

services ( $N = 6$ ), ongoing discussion about privacy during services ( $N = 5$ ), financial assistance for services ( $N = 4$ ), education about psychosocial challenges ( $N = 4$ ), and NCAA support ( $N = 2$ ).

Table 13.

*Additional Barriers to Seeking Services: College Athletes*

Service	College Athlete ( $N = 20$ )
Disappointing Others	10
Loss of Scholarship	7
Loss of Playing Time	4
Personal Pride	4
Denial	3
Lack of Quality Services	2
Privacy and Confidentiality	1

**Statistical Assumptions**

**MANOVA.** The researcher used a MANOVA to answer research questions one through five. Prior to analysis, data for all research questions were evaluated to ensure that the assumptions for this multivariate test were fulfilled. First, all athletic director scores were independent of one another. Only one athletic director could respond from each college or university. There are potential concerns with the assumption of independence of observations of college athletes. While each college athlete could only respond once, it was possible that college athletes could come from the same university and even the same team.

Second, all dependent variables were continuous and measured at the interval level. All independent variables were categorical with two or more mutually exclusive and exhaustive groups. See Table 1 for a complete list of dependent and independent variables for each research question.

Third, a cross tabulation of the independent variable(s) showed that all cells had a minimum of 38 cases, thus showing a large sample size for a MANOVA. (See Tables 14 and 15).

Table 14.

*MANOVA Cross Tabulation: Athletic Directors*

NCAA Division Level	<i>N</i>
Division I	38
Division II	48
Division III	46

Table 15.

*MANOVA Cross Tabulation: College Athletes*

NCAA Division Level	High Profile Sport ( <i>N</i> )	Low Profile Sport ( <i>N</i> )
Division I	45	48
Division II	53	67
Division III	54	82

Fourth, measures of skewness and kurtosis, histograms, and normal Q-Q plots were examined for all dependent variables across the five research questions. Inspections of these measures and plots revealed a non-normal distribution for all dependent variables. While the variables were not normally distributed, a MANOVA can be robust to this violation so long as the smallest cell has 20 cases (Abu-Bader, 2011; Field, 2009). The smallest cell for research questions one and three contained 38 cases. The smallest cell for research questions two, four, and five contained 45 cases.

Fifth, the variance on all dependent variables must have equal variance across all groups of the independent variable(s). To test this assumption, the researcher used



Levene's Test of Homogeneity. This assumption was satisfied for all variables ( $p > 0.001$ ) in each of the five research questions.

Sixth, the relationship between all pairs of the dependent variables must be linear. To test this assumption, the researcher used Bartlett's Test of Sphericity. The results of Bartlett's Test of Sphericity showed a significant correlation between the dependent variables for each research question (See Table 16).

Table 16.

*Results of Bartlett's Test of Sphericity*

Research Question	<i>df</i>	Chi-Square	<i>p</i>
One	5	157.07	<0.001
Two	5	260.86	<0.001
Three	5	260.94	<0.001
Four	5	422.878	<0.001
Five	5	824.76	<0.001

Seventh, the assumption of homoscedasticity implied that covariances of all dependent variables across all levels of the independent variable(s) are equal. The results of the Box's M test were not statistically significant for each of the five research questions ( $p > 0.001$ ). In other words, the covariance matrices of the dependent variables across all groups of the independent variable(s) were equal, thus showing the assumption met.

Eighth, to test for multicollinearity, the researcher examined the relationship between pairs of the dependent variables. The relationship between variables was not too high ( $r < 0.8$ ) (See Tables 17 and 18). Additionally, scores for the VIF were less than or equal to ten, and scores for tolerance were less than 0.1. These findings indicate that the dependent variables for each research question do not appear to be highly correlated.

Table 17.

*MANOVA Correlations Summary Table: College Athletes*

	Need – Athletic Services	Need – Academic Services	Need – Psychosocial Services	Availability – Athletic Services	Availability – Academic Services	Availability – Psychosocial Services	Comfort – Athletic Services	Comfort – Academic Services	Comfort – Psychosocial Services	Service Barriers
Need – Athletic Services	–	0.54**	0.30**	-0.01	0.13	0.30**	0.14*	0.12*	0.08	0.03
Need – Academic Services		–	0.38**	0.14**	0.16**	0.38**	0.09	0.16**	0.06	0.04
Need – Psychosocial Services			–	0.11*	0.08	0.76**	0.05	0.00	0.00	0.12*
Availability – Athletic Services				–	0.70**	0.11*	0.35**	0.54**	0.18**	0.03
Availability – Academic Services					–	0.08	0.34**	0.54**	0.18**	0.03
Availability – Psychosocial Services						–	0.49	0.00	0.00	0.12*
Comfort – Athletic Services							–	0.712**	0.34**	0.02
Comfort – Academic Services								–	0.37**	-0.05
Comfort – Psychosocial Services									–	-0.22**
Service Barriers										–

\*\*Correlation is significant at the 0.01 level (two-tailed)

\*Correlation is significant at the 0.05 level (two-tailed)

Table 18.

*MANOVA Correlations Summary Table: Athletic Directors*

	Need – Athletic Services	Need – Academic Services	Need – Psychosocial Services	Availability – Athletic Services	Availability – Academic Services	Availability – Psychosocial Services
Need – Athletic Services	–	0.26**	0.28**	0.39**	0.29**	0.22*
Need – Academic Services		–	0.52**	0.10	-0.03	-0.06
Need – Psychosocial Services			–	0.05	0.03	-0.03
Availability – Athletic Services				–	0.52**	0.45**
Availability – Academic Services					–	0.45**
Availability – Psychosocial Services						–

\*\*Correlation is significant at the 0.01 level (two-tailed)

\*Correlation is significant at the 0.05 level (two-tailed)

**Two-way ANOVA Assumptions.** The researcher used a two-way ANOVA to answer the sixth research question. As was the case with the usage of a MANOVA, all athletic director scores were independent of one another. The assumption of independence of observations for college athletes was also met.

Second, the dependent variable (composite score for perceived barriers) was continuous and measured at the interval level. Both independent variables (NCAA division membership and profile of sport) were categorical with an appropriate number of mutually exclusive and exhaustive groups.

Third, measures of skewness and kurtosis, histograms, and normal Q-Q plots were examined for composite scores for perceived barriers. Inspections of these measures and plots revealed a normal distribution for the dependent variable.

Fourth, the variance on the dependent variable had equal variance across all groups of the independent variables. To test this assumption, the researcher used Levene's Test of Homogeneity. This assumption was satisfied ( $p > 0.001$ ).

Fifth, data for all groups was collected at the same time. In other words, information about current barriers was collected simultaneously from college athletes at all division levels and from college athletes competing in both high and low profile sports.

### **Research Question One**

A MANOVA was utilized to explore whether there were significant differences between a college athletic director's perception of the current need for athletic, academic, and psychosocial services based on their NCAA division membership.

**Main effect – NCAA division membership.** The results of the MANOVA showed an overall significant difference between NCAA division membership and a college athletic director's perception of the current need for athletic, academic, and psychosocial services (Pillai's Trace = 0.13,  $F_{(2, 129)} = 3.03$ ,  $p = 0.007$ ). Division level accounted for 7% of the variance in an athletic director's perception for the service need of college athletes ( $\eta^2 = 0.07$ ).

The results of the post hoc between-subjects effects indicated that athletic directors differed significantly based on their NCAA division membership and their perception of how much college athletes needed academic services ( $F_{(2,129)} = 9.67$ ,  $p < 0.001$ ,  $CI_{95} = (23.03, 24.24)$ ,  $\eta^2 = 0.13$ ). Division I ( $M = 24.82$ ) and Division II ( $M = 24.33$ ) athletic directors perceived a significantly greater need for academic services than Division III ( $M = 21.76$ ) athletic directors (See Table 19). There were no significant differences between NCAA division level and an athletic director's perception of need for athletic ( $F_{(2,129)} = 0.41$ ,  $p > 0.05$ ,  $\eta^2 = 0.001$ ) and psychosocial services ( $F_{(2,129)} = 1.95$ ,  $p > 0.05$ ,  $\eta^2 = 0.03$ ).

Table 19.

*Results for Perceived Service Needs based on NCAA Division (Athletic Directors)*

Service Type	Division	<i>M (SD)</i>	Post-hoc Results
Athletic	I	16.66 (2.53)	
	II	16.77 (2.00)	
	III	16.39 (1.73)	
Academic*	I	24.82 (2.49)	I > III ( $p < 0.001$ )
	II	24.33 (2.14)	II > III ( $p = 0.002$ )
	III	21.76 (5.03)	
Psychosocial	I	27.50 (5.66)	
	II	27.02 (4.38)	
	III	25.30 (6.24)	

\* $F_{(2,129)} = 9.67$ ,  $p < 0.001$ ,  $CI_{95} = (23.03, 24.24)$ ,  $\eta^2 = 0.13$

## Research Question Two

The researcher used a MANOVA to explore whether there were significant differences between a college athlete's perceived need for athletic, academic, and psychosocial services based on their NCAA division membership and the profile of their sport.

**Main effect – NCAA division membership.** The results of the MANOVA showed an overall significant difference between NCAA division membership on a college athlete's perceived service need (Pillai's Trace = 0.09,  $F_{(2, 343)} = 5.05$ ,  $p < 0.001$ ). Division level accounted for 4% of the variance in service need ( $\eta^2 = 0.04$ ).

The results of the post hoc between-subjects effects indicated that college athletes differed significantly based on their NCAA division level in their perceived need for psychosocial services ( $F_{(2, 343)} = 11.06$ ,  $p < 0.001$ ,  $CI_{95} = (10.13, 11.62)$ ,  $\eta^2 = 0.06$ ). Division I ( $M = 12.75$ ) and II ( $M = 11.19$ ) college athletes had a significantly higher perceived need for psychosocial services than Division III college athletes ( $M = 8.49$ ) (See Table 20). There were no significant differences between NCAA division level and a college athlete's perceived need for athletic ( $F_{(2, 343)} = 0.79$ ,  $p > 0.05$ ,  $\eta^2 = 0.01$ ) or academic services ( $F_{(2, 343)} = 0.77$ ,  $p > 0.05$ ,  $\eta^2 = 0.00$ ).

Table 20.

*Results for Perceived Service Needs based on NCAA Division (College Athletes)*

Service Type	Division	<i>M</i> ( <i>SD</i> )	Post-hoc Results
Athletic	I	11.55 (4.09)	
	II	12.29 (4.40)	
	III	12.15 (4.30)	
Academic	I	16.01 (5.42)	
	II	16.96 (6.10)	
	III	16.49 (5.95)	
Psychosocial*	I	12.75 (6.89)	I > III ( $p < 0.001$ )
	II	11.19 (8.08)	II > III ( $p = 0.005$ )
	III	8.49 (5.74)	

\* $F_{(2,343)} = 11.06, p < 0.001, CI_{95} (10.13, 11.62), \eta^2 = 0.06$

**Main effect – profile of sport.** The results of the MANOVA showed no significant difference between profile of sport on a college athlete's perceived service need (Pillai's Trace = 0.02,  $F_{(1, 343)} = 2.16, p > 0.05$ ). In other words, the profile of a college athlete's sport did not influence their perceived need for athletic, academic, or psychosocial services (See Table 21). Profile of sport accounted for 2% of the total variance in service need.

Table 21.

*Results for Perceived Service Needs based on Profile of Sport (College Athletes)*

Service Type	Division	Profile of Sport	<i>M(SD)</i>
Athletic	I	High	11.87 (4.29)
		Low	11.25 (3.91)
	II	High	12.40 (4.41)
		Low	12.21 (4.42)
	III	High	11.94 (4.36)
		Low	12.11 (4.21)
Academic	I	High	16.38 (5.21)
		Low	15.67 (5.64)
	II	High	17.66 (6.22)
		Low	16.40 (6.00)
	III	High	17.09 (5.41)
		Low	16.09 (6.28)
Psychosocial	I	High	13.91 (5.96)
		Low	11.67 (7.57)
	II	High	12.19 (8.52)
		Low	10.40 (7.68)
	III	High	8.76 (6.07)
		Low	8.32 (5.54)

**Interaction effect – NCAA division membership by profile of sport.** The results of the MANOVA showed no significant division membership by profile of sport interaction effect on a college athlete's perceived service need (Pillai's Trace = 0.01,  $F_{(2, 343)} = 0.70$ ,  $p > 0.05$ ). In this study, division level by profile of sport interaction accounted for one percent of the variance in overall service need ( $\eta^2 = 0.01$ ).

### Research Question Three

A MANOVA provided the researcher the opportunity to explore whether there were significant differences between a college athletic director's perception of the availability of athletic, academic, and psychosocial services based on their NCAA division membership.

**Main effect – NCAA division membership.** The results of the MANOVA showed an overall significant difference between NCAA division membership and a



college athletic director's perception of the current availability of athletic, academic, and psychosocial services (Pillai's Trace = 0.19,  $F_{(2, 129)} = 4.37$ ,  $p < 0.001$ ). Division level accounted for 10% of the variance in an athletic director's perceived need for services ( $\eta^2 = 0.10$ ).

The results of the post hoc between-subjects effects indicated that athletic directors differed significantly based on their NCAA division level in their perception of how available psychosocial services are on their campus ( $F_{(2, 129)} = 6.08$ ,  $p = 0.003$ ,  $CI_{95} = (24.28, 26.62)$ ,  $\eta^2 = 0.09$ ). Division III ( $M = 27.94$ ) athletic directors perceived significantly more availability of psychosocial services than Division I ( $M = 22.79$ ) athletic directors (See Table 22). There were no significant differences between NCAA division level and athletic directors' perception of availability for athletic ( $F_{(2, 129)} = 0.33$ ,  $p > 0.05$ ,  $\eta^2 = 0.01$ ) and academic services ( $F_{(2, 129)} = 1.15$ ,  $p > 0.05$ ,  $\eta^2 = 0.02$ ).

Table 22.

*Results for Service Availability (Athletic Directors)*

Service Type	Division	$M(SD)$	Post-hoc Results
Athletic	I	16.63 (1.92)	I < III ( $p = 0.002$ )
	II	16.50 (1.49)	
	III	16.28 (2.45)	
Academic	I	23.82 (2.97)	
	II	22.69 (3.84)	
	III	22.78 (4.13)	
Psychosocial*	I	22.79 (6.24)	
	II	25.62 (7.06)	
	III	27.93 (6.77)	

\* $F_{(2, 129)} = 6.08$ ,  $p = 0.003$ ,  $CI_{95} = (24.28, 26.62)$ ,  $\eta^2 = 0.09$

#### Research Question Four

A MANOVA was utilized to explore whether there were significant differences between a college athlete's perception of the availability of athletic, academic, and psychosocial services based on their NCAA division membership.

**Main effect – NCAA division membership.** The results of the MANOVA showed an overall significant difference between NCAA division membership and a college athlete's perception of the current availability of athletic, academic, and psychosocial services (Pillai's Trace = 0.13,  $F_{(2, 346)} = 7.89$ ,  $p < 0.001$ ). Division level accounted for 7% of the variance in a college athlete's perception of service availability ( $\eta^2 = 0.07$ ).

The results of the post hoc between-subjects effects indicated that college athletes differed significantly based on their NCAA division level in their perception of how available athletic services are on their campus ( $F_{(2, 346)} = 12.27$ ,  $p < 0.001$ ,  $CI_{95} = (14.12, 15.28)$ ,  $\eta^2 = 0.07$ ). Division I ( $M = 15.37$ ) and Division II ( $M = 15.18$ ) college athletes perceived significantly more availability of athletic services than Division III ( $M = 14.60$ ) college athletes.

College athletes also differed on their perception of availability for academic services ( $F_{(2, 346)} = 7.35$ ,  $p = 0.01$ ,  $CI_{95} = (21.23, 23.03)$ ,  $\eta^2 = 0.04$ ). Division I ( $M = 23.39$ ) college athletes perceived significantly more availability of academic services than Division III ( $M = 20.88$ ) college athletes.

College athletes' perceptions on the availability of psychosocial services differed by division level too ( $F_{(2, 346)} = 11.23$ ,  $p < 0.001$ ,  $CI_{95} = (9.54, 12.09)$ ,  $\eta^2 = 0.06$ ). Division I ( $M = 12.75$ ) and Division II ( $M = 11.19$ ) college athletes perceived

significantly more availability of psychosocial services than Division III college athletes ( $M = 8.49$ ). See Table 23 for a complete breakdown of the MANOVA results.

Table 23.

*Results for Service Availability (College Athletes)*

Service Type	Division	$M(SD)$	Post-hoc Results
Athletic*	I	15.37 (2.84)	I > III ( $p < 0.001$ )
	II	15.18 (2.81)	II > III ( $p < 0.001$ )
	III	14.60 (3.60)	
Academic**	I	23.39 (4.17)	I > III ( $p < 0.001$ )
	II	22.12 (4.74)	
	III	20.88 (5.47)	
Psychosocial***	I	12.75 (6.89)	I > III ( $p < 0.001$ )
	II	11.19 (8.08)	II > III ( $p = 0.006$ )
	III	8.49 (5.74)	

\* $F_{(2, 346)} = 12.27, p < 0.001, CI_{95} = (14.12, 15.28), \eta^2 = 0.07$

\*\* $F_{(2, 346)} = 7.35, p = 0.01, CI_{95} = (21.23, 23.03), \eta^2 = 0.04$

\*\*\* $F_{(2, 346)} = 11.23, p < 0.001, CI_{95} = (9.54, 12.09), \eta^2 = 0.06$

### Research Question Five

The researcher used a MANOVA to explore whether there were significant differences between a college athlete's comfort in seeking athletic, academic, and psychosocial services based on their NCAA division membership and the profile of their sport.

**Main effect – NCAA division membership.** The results of the MANOVA showed an overall significant difference between NCAA division membership on a college athlete's comfort in seeking services (Pillai's Trace = 0.10,  $F_{(2, 343)} = 6.11, p < 0.001$ ). Division level accounted for 5% of the variance in comfort level with services ( $\eta^2 = 0.05$ ).

The results of the post hoc between-subjects effects indicated that college athletes differed significantly based on their NCAA division level in their comfort with seeking psychosocial services ( $F_{(2, 343)} = 8.88, p < 0.001, CI_{95} = (17.92, 19.96), \eta^2 = 0.05$ ).

Division I college athletes experienced significantly lower levels of comfort in seeking psychosocial services ( $M = 15.73$ ) than Division II ( $M = 20.84$ ) and Division III ( $M = 19.73$ ) college athletes (See Table 24). There were no significant differences between NCAA division level and comfort seeking athletic ( $F_{(2,343)} = 2.28, p > 0.05, \eta^2 = 0.01$ ) or academic services ( $F_{(2,343)} = 1.92, p > 0.05, \eta^2 = 0.01$ ).

Table 24.

*Results for Comfort Seeking Services based on NCAA Division (College Athletes)*

Service Type	Division	$M(SD)$	Post-hoc Results
Athletic	I	16.33 (2.52)	
	II	15.82 (2.79)	
	III	15.46 (2.92)	
Academic	I	24.15 (3.78)	
	II	23.03 (4.47)	
	III	23.15 (3.98)	
Psychosocial*	I	15.73 (7.52)	I < II ( $p < 0.001$ )
	II	20.84 (10.10)	
	III	19.73 (10.25)	I < III ( $p = 0.002$ )

\* $F_{(2,343)} = 8.88, p < 0.001, CI_{95} = (17.92, 19.96), \eta^2 = 0.05$

**Main effect – profile of sport.** The results of the MANOVA showed no significant difference between profile of sport on a college athlete's comfort in seeking services (Pillai's Trace = 0.01,  $F_{(1, 343)} = 1.33, p > 0.05$ ). In other words, the profile of a college athlete's sport did not influence their comfort seeking athletic, academic, or psychosocial services (See Table 25). Profile of sport accounted for 1% of the variance in a college athlete's comfort with seeking services ( $\eta^2 = 0.01$ ).

Table 25.

*Results for Comfort Seeking Services based on Profile of Sport (College Athletes)*

Service Type	Division	Profile of Sport	<i>M(SD)</i>
Athletic	I	High	16.29 (2.69)
		Low	16.37 (2.38)
	II	High	15.92 (2.81)
		Low	15.73 (2.79)
	III	High	15.83 (2.89)
		Low	15.22 (2.94)
Academic	I	High	24.38 (3.74)
		Low	23.94 (3.84)
	II	High	23.38 (4.47)
		Low	22.75 (4.50)
	III	High	23.81 (3.98)
		Low	22.71 (4.50)
Psychosocial	I	High	15.44 (7.82)
		Low	16.00 (7.30)
	II	High	21.47 (10.84)
		Low	20.34 (9.53)
	III	High	22.44 (10.37)
		Low	17.94 (9.83)

**Interaction effect – NCAA division membership by profile of sport.** The results of the MANOVA showed no significant division membership by profile of sport interaction effect on a college athlete's comfort of seeking athletic, academic, or psychosocial services (Pillai's Trace = 0.10,  $F_{(2, 343)} = 0.75$ ,  $p > 0.05$ ). In this study, division level by profile of sport interaction accounted for less than 1% of the variance in overall comfort with seeking services ( $\eta^2 = 0.00$ ).

**Research Question Six**

The researcher used a two-way ANOVA to explore whether or not there were statistically significant differences in a college athletes' perception of current barriers to seeking services based on their NCAA division membership and profile of sport.

**Main effect – NCAA division membership.** The results of the two-way ANOVA showed an overall significant difference between NCAA division membership on a

college athlete's level of service barriers ( $F_{(2, 343)} = 4.68, p = 0.010, CI_{95} = (58.25, 63.06), \eta^2 = 0.03$ ). Division I ( $M = 66.15$ ) college athletes reported significantly higher levels of barriers than Division II ( $M = 57.99$ ) and Division III ( $M = 57.77$ ) college athletes.

Overall, NCAA division membership accounted for 3% of the variance in the level of barriers experienced, indicating a weak relationship between the two variables (See Table 26).

Table 26.

*Results for Service Barriers (College Athletes)*

Division	<i>M(SD)</i>	Post-hoc Results
I	66.15 (24.59)	I > II ( $p = 0.026$ ) I > III ( $p = 0.018$ )
II	57.99 (21.48)	
III	57.77 (21.30)	

\*  $F_{(2, 343)} = 4.68, p = 0.010, CI_{95} = (58.25, 63.06), \eta^2 = 0.03$

**Main effect – profile of sport.** The results of the two-way ANOVA showed no overall significant difference between profile of sport and a college athlete's perceived service barriers ( $F_{(1, 343)} = 0.12, p > 0.05, \eta^2 = 0.00$ ). In other words, college athletes competing in a high profile sport ( $M = 60.71$ ) were as likely as college athletes competing in a low profile sport ( $M = 59.58$ ) to experience service barriers. Profile of sport accounted for less than 1% of the variance in the level of barriers experienced, indicating a weak relationship between the two variables.

**Interaction effect – NCAA division membership by profile of sport.** The results of the two-way ANOVA showed no significant division membership by profile of sport interaction effect on a college athlete's level of service barriers ( $F_{(2, 343)} = 0.13, p > 0.05, \eta^2 = 0.00$ ). In this study, division membership by profile of sport interaction accounted for less than one percent of the variance in overall service barriers.

## CHAPTER FIVE - DISCUSSION

### Significant Findings

There were multiple significant findings for this research study. The following sections review the key findings for each of the six research questions.

**Research question one.** Overall, division level has an impact on perceived service needs. In particular, Division I and II athletic directors see a greater need for academic services as compared to Division III athletic directors. Division III programs hold academics as the primary focus for a college athlete. In order to achieve this, Division III programs minimize conflicts between athletics and academics by having shorter practices and playing seasons, a reduced number of competitions, and postseason competition that limits travel and time away from class (NCAA, 2014a). Division I and II college athletes do not have these same advantages as their athletic seasons are longer, there are more competitions, and travel is inevitable.

Longer schedules, more competitions, and more traveling certainly takes away emphasis from academics and places it on athletics. It is because of this that Division I and II college athletes have lower grade point averages and graduation rates than Division III college athletes (LaForge & Hodge, 2011). To address these disparities, the NCAA (2014) and athletic directors implemented new policies in 2012-2013 that looked at a college or university's Academic Progress Rate (APR) and graduation success rates. The NCAA now ties eligibility to these standards. For example, teams must earn a four-year APR of 930 to compete in championships. This is a metric that accounts for the eligibility and retention of each college athlete, each term (NCAA, 2014a).

Over the past couple of years, the NCAA (2014) reports that grade point averages and graduation rates amongst Division I and II college athletes are on the rise. This is in large part because of the value placed on improving the grades and graduation rates of college athletes by administrators and coaches (LaForge & Hodge, 2011). This researcher wonders if similar focus was put on psychosocial needs would rates of depression, suicide, alcohol and substance abuse, and eating disorders decrease. As it stands now, athletic directors view psychosocial services as being less needed than athletic and academic services.

**Research question two.** This research study found that 26% of college athletes reported a moderate to severe need for mental health services. This percentage is higher than previous studies indicated (Armstrong & Oomen-Early, 2009; Gardiner, 2006). Nine percent of college athletes reported that they had a moderate to severe need for suicide prevention services, which was also higher than a previous study by Miller and Hoffman (2009). Miller and Hoffman (2009) found that 5% of college athletes needed help with suicidal thoughts. The need for alcohol (11%) and substance abuse (9%) services was consistent with previous research findings (Ford, 2007a; Yusko et al., 2008).

In addition to these descriptive statistics, this research found that Division I and II college athletes had significantly higher psychosocial needs than Division III college athletes. Potential reasons for this disparity between Division I and II college athletes as compared to Division III college athletes include more sport-related time commitments, increased emphasis placed on competition outcomes, challenges managing the dual role of being a student and a college athlete, academic stress, and social isolation (DeFreese & Smith, 2013; Maniar et al., 2005; Miller & Hoffman, 2009; Williams et al., 2008). In



addition, Division I and II college athletes are more likely to receive media attention, to receive more pressure from the overall campus to perform, and these college athletes are more likely to believe that people only respect them for their athletic abilities (Gill, 2014; Maniar et al., 2005; Parsons, 2013).

Understanding that these specific college athletes are at a greater risk of developing a psychosocial need means that colleges and universities must place more emphasis on their awareness of these needs and the availability of support services. As stated earlier, Division I and II athletic directors did not believe that the psychosocial needs of their college athletes were significantly different than Division III college athletes. Additionally, athletic directors viewed psychosocial services to be less needed than athletic and academic services. If Division I and II athletic directors do not see the difference in level of need for their college athletes it is likely that nothing will be done to advance measures for safety and well-being. Through this discussion, one might raise the question – is meeting athletic and academic needs more important than ensuring a college athlete's overall well-being?

**Research questions three and four.** It is not shocking that Division I and Division II college athletes perceived athletic services to be more readily available at their colleges or universities than at Division III programs (Foster, 2014). Division I and Division II programs place a larger emphasis on athletics by offering athletic scholarships, spending more money on athletic programming, and finding more ways to produce revenue through athletic functions (Gill, 2014). Knowing that these programs place a larger emphasis on competition and generate increased revenue, it is logical that they would spend more on services such as athletic training and sports medicine.

This finding might support the notion that athletic accomplishments matter more than academic success or personal well-being. This emphasis on athletics is yet another reason why many college athletes might not disclose their true needs for psychosocial services. It also begs the questions about whether or not colleges and universities are establishing a model where college athletes are not just there to compete, but are attending a college or university to be a true student-athlete.

College athletes also perceived that Division I programs had significantly more availability of academic services than Division III programs. Division I programs are more likely to provide college athletes with dedicated academic advisors, specialized orientation assistance, built-in study tables, and hired tutors (Armstrong & Oomen-Early, 2009). These services are also available to a certain degree at Division II programs, but not common at the Division III level. Another likely factor in this disparity is that Division III programs do not offer special services for college athletes. Division III college athletes have the same access to student services as any non-athlete and access them the same way.

An unexpected finding was that Division III athletic directors perceived psychosocial services to be significantly more available than Division I programs. Additionally, Division I athletic directors perceived that psychosocial service needs ( $M = 27.50$ ) were greater than the availability of psychosocial services ( $M = 22.79$ ). Division III athletic directors perceived that the availability of services ( $M = 25.61$ ) matched closely with the perceived need ( $M = 26.56$ ).

After the discovery of this finding, the researcher explored counseling center websites for multiple colleges and universities. The researcher speculates that while

Division I programs offered a wider range of services and had more staff to address psychosocial needs than Division III programs, that the needs of Division I college athletes are often more severe and are not met by traditional counseling programs on campus. Additionally, it is possible that Division I athletic directors recognize that services are not available during the free time of college athletes, which highlights the need for extended service hours, the ability to make appointments, or to have an individual whose sole responsibility is to look exclusively at the needs of college athletes (Lopez & Levy, 2013; Manier et al., 2001; Watson, 2005). Future programming might also explore how time management, peer mentoring, and leadership development programs might positively influence the response to psychosocial needs. These were programs that both athletic directors and college athletes identified as missing on their college campus.

There is also a potential difference in the culture of Division I and II versus Division III programs. At many Division III programs, coaches are not as concerned about producing revenues and victories as they are about extending the college classroom in to an athletic environment (Schrotenboer, 2012). Furthermore, faculty, staff, and members of an athletic department typically have more openness in their lines of communication when it comes to concerns about a college athlete's safety and well-being (Suggs, 2003). This means that risks are often identified earlier and there are fewer layers to work through to ensure a college athlete receives the help he or she needs.

College athletes shared the opposite viewpoint, in that Division I and Division II college athletes perceived psychosocial services to be more readily available than Division III college athletes. A likely reason for these findings is that Division III programs typically have fewer services to address psychosocial needs. It is also possible

that Division III college athletes mistake availability of services with quantity of services as opposed to the effectiveness of available services.

The descriptive statistics on the availability of support services also presented some interesting findings. First, college athletes reported higher scores for availability across services than what they reported for current needs, while athletic directors scored service need and availability in a similar range. There are several reasons why this might have occurred. College athletes rated their own personal need for support services, while athletic directors gave their perceptions for their entire college athlete population. Furthermore, despite the anonymity of responses, college athletes might be hesitant about disclosing their needs and are likely underreporting this information.

Second, college athletes viewed psychosocial services as being less available on their campus than did athletic directors at each division level. Another finding that was consistent amongst both athletic directors and college athletes at all division levels was that psychosocial services were less available than both athletic and academic services. This speaks directly to the need for colleges and universities to do more to make programs available, or if programs are available, to make college athletes more aware of the services or make the services more accessible to college athletes. Additionally, it was mentioned in responses to the open-ended questions that athletic departments would benefit from having a professional on the department staff that could provide individualized services to college athletes and that colleges and universities produce a resource guide for college athletes.

**Research question five.** Division I college athletes experienced significantly lower levels of comfort in seeking psychosocial services than Division II and Division III

college athletes. In reviewing the open-ended statements provided by college athletes, Division I college athletes identified that seeking services might cause them to lose playing time, to lose their athletic scholarship, to disappoint their family, to let down their coaches and teammates, and to damage their own self-pride and self-image. These themes match closely with previous research on barriers to seeking services (Brenner & Swanik, 2007; Ford, 2007a; Gill, 2014; Williams et al., 2008). All of these factors certainly could impact their comfort level with seeking services.

In addition, the descriptive data revealed that college athletes across the three divisions were more likely to feel comfortable seeking athletic and academic services than psychosocial services. There are a couple of likely reasons for these disparities. First, the past several years produced multiple national media stories about college athletes that are experiencing psychosocial challenges. Many college athletes may fear that their personal situation could become the next public debate (Gill, 2014). Second, a social construct is that college athletes are supposed to be immune to the challenges that other college students face (Armstrong & Oomen-Early, 2009). To violate these social constructs means that college athletes are weak (Parsons, 2013). Third, in responding to the open-ended questions posed by the researcher, college athletes indicated that other reasons they do not feel comfortable seeking services is because athletic departments do not take an interest in helping their college athletes, existing service quality is poor, and they also worry about the privacy and confidentiality of services. Not to mention, many college athletes believe that seeking help for a psychosocial risk could cost them their athletic scholarship and playing time. Moreover, by admitting they need help, college athletes feel that they may disappoint others (e.g., family, coaches, and teammates).

The fact that college athletes do not feel comfortable seeking psychosocial services is extremely alarming, especially knowing that a percentage of athletes have a moderate to severe need for these services. If college athletes do not receive the support necessary to help them, the number of college athletes experiencing psychosocial needs will continue to rise (Beauchemin, 2014; Dean & Rowan, 2014). It is imperative that colleges and universities explore strategies for encouraging college athletes to disclose the challenges they are facing. College athletes need continued reassurance that seeking help is both acceptable and encouraged.

**Research question six.** Division I college athletes reported significantly higher levels of barriers to seeking necessary services than Division II and Division III college athletes. The two barriers that college athletes identified as being the most prevalent were lack of time to seek services and lack of services during their free time. This is not surprising given the time commitment of college athletes, especially those competing at the Division I level (Watson & Kissinger, 2007). Division I college athletes were also more likely to be concerned about the thoughts of their teammates and coaches and to feel the necessity to hide their needs from them.

The college athlete-coach and teammate relationships are extremely important as many college athletes spend more time within an athletic environment than they do with their own family and friends, especially during their sporting season (Gearity, 2010; Gearity & Murray, 2011; Poczwadowski, Barrot, & Jowett, 2006; Smith, Smoll, & Curtis, 2007; Stewart & Owens, 2011). The time a coach and teammates spend with a college athlete is critical to early detection of what eventually could be serious and even debilitating psychosocial risks. These relationships should foster personal growth, and

not cause college athletes to feel that they cannot share their personal struggles (Giacobbi, Whitney, Roper, & Butryn, 2002; Lafreniere, Jowett, Vallerand, Donahue, & Lorimer, 2008).

If college athletes are going to get their psychosocial needs met, colleges and universities must find ways to break down the barriers mentioned above and the other barriers identified by college athletes (Lopez & Levy, 2013; Maniar et al., 2001; Watson, 2005). The current service structure presents too many challenges to college athletes.

**Summary.** This research highlights the impact that NCAA division membership had on the research findings. While division membership led to significant differences, the profile of a college athlete's sport did not have a significant impact on any of the research questions. A possible explanation for this was the fact that college athletes self-identified whether or not they participated in a high or low profile sport. Future research should explore more closely how to operationalize this definition to ensure the accuracy of results.

Despite the lack of findings for the profile of a college athlete's sport, there were multiple significant findings in this study. These significant findings point clearly to the fact that more must be done to ensure the psychosocial safety and well-being of college athletes. This includes athletic departments more clearly understanding the needs of their college athletes, having services more readily available, finding ways to promote a college athlete's disclosure of a psychosocial risk, and working to address current barriers that prevent college athletes from seeking help.

This research also highlights the impact that NCAA division membership had on the research findings. While division membership led to significant differences, the

profile of a college athlete's sport did not have a significant impact on any of the research questions. A possible explanation for this was the fact that college athletes self-identified whether or not they participated in a high or low profile sport. Future research should explore more closely how to operationalize this definition to ensure the accuracy of results.

One idea for improving the current state of services would be the interprofessional collaboration of social workers with college athletic departments. Specifically, universities or colleges should hire social workers to (1) provide ongoing education and outreach that promotes awareness of psychosocial needs, (2) to encourage college athletes to view psychosocial services as more acceptable, (3) to assess and intervene when a college athlete is experiencing a psychosocial challenge, and (4) to serve as an advisor on a school's sport performance team. This model would differ from traditional sport psychology models in that the concern is not about how factors of well-being impact sports performance; rather, how factors of well-being impact all areas of a college athlete's life.

### **Athletic Well-being Model**

The values and ethics of the social work profession (Dean & Rowan, 2014; National Association of Social Workers, NASW, 2008) are a strong fit for understanding the environmental and internal stressors impacting college athletes. Social workers are broad practitioners that focus on the environment and other influences that affect a college athlete's safety and well-being (Dean & Rowan, 2014). In large part, this is what makes the social work profession an appropriate discipline for carrying out the Athletic Well-being Model. Social workers respect the dignity and worth of all individuals and



would work tirelessly to promote social justice (NASW, 2008). They would also respect a college athlete's culture and diversity. Athletic social workers would have the competency needed to address the unique needs of each college athlete, which includes competition level and other demographic criteria. It also includes consideration of each college athlete's level of comfort with services and an individualized plan for ensuring that barriers do not prevent a college athlete from receiving help. Athletic social workers would also recognize when the needs of a college athlete could not be addressed using currently available services, and would be able to partner with community organizations to ensure college athletes have access to any service(s) they might need (Dean & Rowan, 2014).

Besides these services, athletic social workers could fill additional service gaps identified by both athletic directors and college athletes. In particular, athletic social workers might provide financial planning services, bystander intervention, relationship counseling, social media education, leadership development, community engagement, life skills training, soft-skills training, diversity education, time management courses, and sexual assault training (Gill, 2014). Not to mention, athletic social workers could also help college athletes cope with personal and school tragedies, scandals, the death of a teammate, pending criminal charges or convictions, retiring from a college athletic career, and even the pressure facing the small percentage of college athletes who will play at the professional level (Gill, 2008).

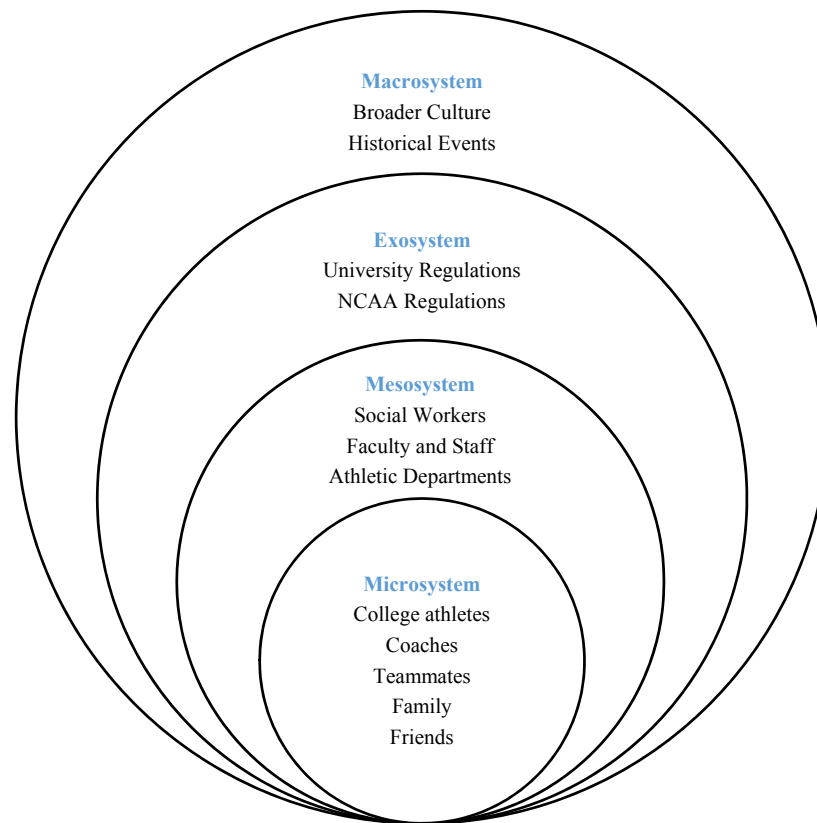
If an athletic social worker was on departmental staff they could utilize an appointment system, which would be more conducive for college athletes' schedules.

They could also put together a resource guide of available services and serve as a go-to figure or common face for college athletes to trust.

In order for the social work profession to make this leap into athletics, the profession must be prepared to share how it provides the behavioral, theoretical, practical, and political components needed to impact the lives of college athletes. The following sections will discuss these components and how they could be utilized to create the Athletic Well-being Model and guide social workers in their practice with college athletes. Presenting this evidence is necessary to show the NCAA, athletic directors, and college athletes that social workers have the tools necessary to address the growing problem of psychosocial risks in college sports. Currently, college and universities are not using social workers in to exclusively work with college athletes. This research proposes the creation of this new position – Athletic Social Worker.

**Human behavior in the social environment.** When relating college athletes to the field of social work, it is important to take into account the interactions between a college athlete and his or her social environment (Ashford, LeCroy, & Lortie, 2006; Schriver, 2011). Of particular importance is the use of an ecological map, which supports the notion that a college athlete is understood only in the context of the systems in which they live (Bronfenbrenner, 1977; Germain, 1991). This includes identification of a micro, meso, exo, and macro system (Ashford et al., 2006). These systems provide social workers the ability to focus on person-in-environment transactions (Schriver, 2011). See Figure 1 for an ecological map of the Athletic Well-being Model.

Figure 1.

*Ecological Map for the Athletic Well-being Model*

This ecological map would help address potential barriers to seeking psychosocial services by speaking with college athletes about their coaching staff, teammates, family, athletic directors, and the stereotypes that members of their college or university have about college athletes. Additionally, an ecological map would encourage an athletic social worker to discuss the college athlete's personal feelings about their psychosocial risk. Gaining a clearer picture of potential supports and barriers is imperative for determining how best to intervene in a college athlete's life (Chang, Scott, & Decker, 2009). This model would go a long way in identifying service barriers and encourages working with a college athlete and their support network to see how each entity is vital in helping a college athlete in the change process.

**Systems theory.** Due to significant sport-related time commitments, many college athletes look at their team and athletic department as a family. This family consists of teammates, members of the coaching staff, and other professionals and students who participate in team activities. By spending time and participating in activities together, members of an athletic team certainly develop individual, group, and organizational relationships. These team structures and relationships are very similar to familial dynamics explored in a social work systems theory (Compton & Galaway, 1989; Payne, 2005; Turner, 1996). Therefore, it is possible that social workers could assess and intervene in the safety and well-being of college athletes through a systems lens.

Several key constructs of systems theory relate to the assessment and treatment of a college athlete's psychosocial needs. To begin, college athletes are members of multiple systems. For example, they are a part of their athletic team, but also a member of the overall campus community and their own personal family system. These systems place tremendous pressure on college athletes, which manifest as a variety of psychosocial risks. In other words, a college athlete's perception of dysfunction in a system causes stress and anxiety (Germain & Gitterman, 1996), which might lead to dangerous psychosocial behaviors (Payne, 2005). In these situations, college athletes would require support from other members of their systems to rebuild their self-concept, self-esteem, and self-direction (Germain & Gitterman, 1996). The ultimate goal of systems theory is to develop a caring community and to promote active partnerships (Turner, 1996). College athletes that experience injuries report that proper utilization of their support systems allow them to cope with their emotions (Johnston & Carroll, 1998;

Wrisberg & Fisher, 2005; Yang, Peek-Asa, Lowe, Heiden, & Foster, 2010). The same could very well be true for college athletes experiencing psychosocial risks.

As evident in this research, college athletes often do not feel that psychosocial services are available nor do they feel comfortable voicing risky behavior. By using systems theory, athletic programs might begin to understand the need to further provide a social environment that supports college athletes in addressing their psychosocial risks. This includes athletic programs and the overall campus population recognizing the true extent of college athlete needs, having services available to assist a college athlete, and ensuring that each part of the system supports a college athlete to make choices that promote their own psychosocial well-being. This theory could also help to dispel a college athlete's belief that their coaching staff, athletic directors, teammates, and the overall campus would not support their disclosure of a risk factor.

**Self-efficacy theory.** On a daily basis, college athletes use their physical and mental talents to compete and perform at a high level. Such capabilities include self-determination and empowerment, which help college athletes achieve both individual and team success. The concepts of self-determination and empowerment are also critical components to self-efficacy theory in social work practice (Brown & Malouff, 2005; Turner, 1996). While college athletes use characteristics of self-efficacy theory to improve athletic performance and to motivate themselves on the field, it is possible these self-efficacy components could also translate to tackling psychosocial risks off the field. There is clear evidence linking self-efficacy theory to career development amongst college students (Burns, Jasinski, Dunn, & Fletcher, 2013; Fouad, Cotter, & Kantamneni, 2009;

Scott & Ciani, 2008). A similar approach might also promote healthy psychosocial development.

Social work professionals use self-efficacy theory to help individuals see how success in one area of life can translate into another (Petrovich, 2004). For example, a practitioner might help a college athlete see how they achieved their sport-related goals through perseverance and commitment. These characteristics might help a college athlete address common psychosocial risks too. Furthermore, social work professionals help individuals learn from their past efforts, whether successful or not (Turner, 1996). This also might resonate with college athletes who consistently use past experiences in preparation for competition. Therefore, this mentality of learning, making changes, and improving performance might help college athletes overcome psychosocial risks. Additionally, self-efficacy theory requires clients to improvise in ever-changing situations, most of which involve unpredictable and stressful elements (Bandura, 2001). Nearly all college sporting events place college athletes in these situations. Ultimately, college athletes are typically good at utilizing their strengths, improving their weaknesses, and practicing new behaviors. Social workers use these same steps to help individuals improve personal situations (Turner, 1996).

**Strengths perspective.** The strengths perspective (Saleebey, 2002) emphasizes the aforementioned fact that all college athletes have many strengths. These strengths might provide a college athlete with the capacity to learn, to grow, and to eventually change their patterns. Additionally, the strengths perspective (Dean & Rowan, 2014; Saleebey, 2002) supports the use of an ecological model as problems are seen as the result

of interactions between individuals, organizations, and societal structures rather than deficits within individuals.

More specifically, the strengths perspective directs all persons working with clients to guard against allowing negative labels to dictate or constrain the course of treatment that a given client might seek (Saleebey, 2002). In other words, social constructs about college athletes and a college athlete's feelings that other people might view them as weak should not factor into the decision on whether or not to seek services.

**Motivational Interviewing (MI).** Miller and Rollnick (2002) define MI as a client-centered, directive method for motivating change by exploring and resolving ambivalence. The primary goal of MI is to encourage change talk and to discourage resistance talk (Miller & Rollnick, 2002). The Athletic Well-being Model would use MI strategies for expressing empathy, developing discrepancies, rolling with resistance, and supporting self-efficacy (Miller & Rollnick, 2002). Athletic social workers would use open-ended questions, affirmations, reflections, reframes, and summarizations (Chang et al., 2009; Treasure & Ward, 1997). These professional practice skills would help athletic social workers support college athlete autonomy, to work collaboratively with the college athlete and his or her support system, and to ensure a college athlete's personal values and beliefs remain at the forefront of change (Moore & Tschannen-Moran, 2010; Treasure & Ward, 1997).

Motivational Interviewing is an established practice model, with mounting evidence in research for its effective improvement of psychosocial risks, especially mental health (Brody, 2009; Westra, 2004; Zerler, 2009), substance abuse (Gingerich & Peterson, 2013; Johnson, Sacks, & Edmonds, 2010; Simpson & Zuckoff, 2011; Westra,

Aviram, & Odell, 2011), alcohol abuse (Branscum & Sharma, 2010; Feldstein & Forcehimes, 2007; Harris, Aldea, & Kirkley, 2006; Martens, Smith, & Murphy, 2013), and eating disorders (Knowles, Anokhina, & Serpell, 2013; Macdonald, Hibbs, Corfield, & Treasure, 2012; Weiss, Mills, Westra, & Carter, 2013). Gingerich and Peterson (2013) found that MI is also cost-effective, requires fewer therapeutic sessions, and is adaptable to a variety of environments more so than other intervention solutions.

Knowing that time is limited in the life of a college athlete, MI would provide a practice model that maximizes a college athlete's free time, yet provides a model that has the propensity to improve a college athlete's underlying needs. It also encourages a college athlete to think about the positive aspects of change, which empowers a college athlete as opposed to making a college athlete think they are weak for needing help (Miller & Rollnick, 2002).

**Transtheoretical Model.** The Transtheoretical Model provides social workers with an understanding of how and when to help a college athlete alter their behaviors (Prochaska, DiClemente, & Norcross, 1992). This model suggests there are five stages of change: precontemplation (not ready for change), contemplation (thinking about change), preparation (preparing for action), action (taking action), and maintenance (maintaining a good behavior) (Prochaska et al., 1992). The Athletic Well-being Model would take into consideration where a college athlete is in the change process and how best to help a college athlete progress from one stage to the next (Prochaska & Prochaska, 2002). As with MI, research also provides evidence that the Transtheoretical Model helps individuals overcome psychosocial challenges (LaBrie, Lamb, Pederson, & Quinlan,

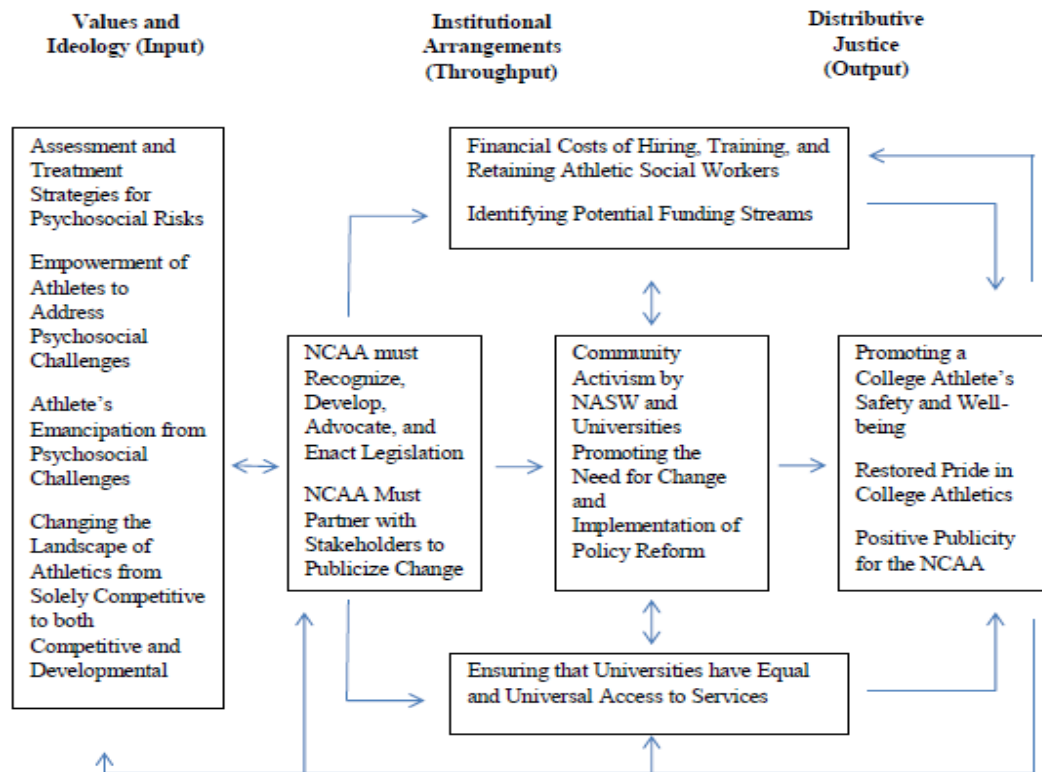


2006; LaBrie, Pederson, Lamb, & Quinlan, 2007; Tollison, Lee, Neighbors, Neil, Olson, & Larimer, 2008).

By using the Transtheoretical Model, athletic social workers would do the following: (1) accept and meet a college athlete where they are at in the change process, (2) support a college athlete's individualized goals and objectives, (3) motivate a college athlete to make changes for the betterment of their life, and (4) share power with the college athlete to support their self-efficacy and self-confidence (Chang et al., 2009; Miller & Rollnick, 2002; Prochaska et al., 1992).

**Critical social policy.** Critical social policy calls for change around empowerment and emancipation (Midgley & Livermore, 2009). Social policy also challenges the institutional structures that dominate society (Midgley & Livermore, 2009). In this example, the NCAA and affiliated athletic departments are the dominant institutional structure and college athletes are the members of society. The use of critical social policy could help the NCAA and athletic departments see the need for action that addresses social injustices and promotes equal access and availability to the assessment and treatment of psychosocial risks. With the utilization of critical social policy, the NCAA and athletic departments could seek social liberation from the psychosocial challenges tarnishing the future of many college athletes (Midgley & Livermore, 2009). Figure 2 provides a policy model created by the author for advancing the Athletic Well-being Model. Not to mention, this policy framework could provide assistance to the NCAA in the development of bylaws and legislative initiatives for improving college athlete health and safety.

### *Critical Social Policy for the Athletic Well-being Model*



**Summary.** Having reviewed these various theoretical, practical, and political components, it should be evident that the social work profession could help develop an Athletic Well-being Model. The objectives of this model is to have social workers refer college athletes for psychosocial evaluation and care, to address psychosocial risks during pre-participation examinations, to establish routine evaluations to assess an athlete's total well-being, and to intervene in an athlete's life when they are experiencing psychosocial challenges.

In order to achieve these aims, social workers must be able to integrate themselves into athletic departments. They must be able to work with coaches, administrators, and other members of a team to best understand and address the

challenges facing college athletes. This highlights the need for an ecological and systems approach to treatment.

Once integrated into an athletic department, social workers must be able to use biopsychosocial assessments and the strengths-based perspective to identify both a college athlete's risk and protective factors. Identification of these risk and protective factors will help social workers determine the likelihood that a college athlete will experience a psychosocial challenge. Additionally, if a college athlete does experience a psychosocial challenge, social workers will have a deeper understanding of possible contributing factors and how best to intervene.

From an intervention standpoint, social workers can work quickly to help an athlete remain healthy during season, and then look for more intensive treatment when an athlete does have more free time. The use of motivational interviewing provides the brief intervention strategy necessary to maximize a college athletes time.

If utilized correctly, social workers could make services more available and more comfortable for college athletes to seek. Social workers can also minimize service barriers by offering services at times best for college athletes, by ensuring privacy and confidentiality, and empathizing with the hectic life of a college athlete. Ultimately, we know that college athletes are not immune to psychosocial risks, but we need athletes who are willing to disclose their challenges and to actively work at addressing their problems. If a college athlete is not healthy from a psychosocial perspective it begs the question as to how effective they are in competition. Social workers can serve as the liaisons between performing well on game day and also establishing patterns that are going to promote excellent global citizens.

### **Study Limitations**

This research study had limitations that might have impacted the results. First, the study collected information from athletic directors and college athletes during the summer months. While the summer months are slower for athletic directors and likely helped to improve their response rate, many college athletes might not regularly check their emails when away from school. This could have impacted the response rate of college athletes and influenced the number of college athletes that responded to the survey.

Second, despite an attempt to randomly select an initial study sample, the response rates made the final sample more of an availability sample. This causes concerns with the generalizability of the findings. In other words, there are concerns about the accuracy of the findings and how well the findings represent the perceptions of athletic directors and college athletes (Rubin & Babbie, 2011). Despite this concern the study sample (athletic directors) shared similar gender and race characteristics with the overall population (NCAA, 2014c). In particular, athletic directors participating in this study shared similar gender and racial makeups as the overall population of athletic directors. The same can be said for the college athletes participating in the study.

Third, the measurement tools used for this research were constructed specifically for this study. While the researcher was able to check for face validity and internal consistency reliability, additional information about the reliability and validity of the tools remains unknown. Additionally, it is impossible to ensure that all participants understood each question in the same way (Austin, Gibson, Deary, McGregor, & Dent, 1998). While some of the questions were concrete, other questions had more abstract

orientations that explored respondents' perceptions of various concepts. The use of a Likert scale also posed a limitation. People often interpret and use Likert scales differently, which can lead to spurious results (Austin et al., 1998). Future surveys might also ask questions about current service utilization and satisfaction of services.

Fourth, the findings in this study presented similar challenges as previous research, with only having small effect sizes (Armstrong & Oomen-Early, 2009; Watson & Kissinger, 2007; Yusko et al., 2008). As mentioned earlier, the lack of a moderate to large effect size is concerning as it is challenging to estimate the true relationship between variables.

Fifth, there is a lack of prior research studies exploring the availability of psychosocial services, the comfort level of college athletes with seeking psychosocial services, and the types of barriers that factor into a college athlete's decision on whether they should seek necessary services. The lack of existing research made this an exploratory as opposed to an explanatory study.

Sixth, this study relied on self-reported data. Thus, there is no way to independently verify participant responses. In other words, there is no way of knowing how honest participants were in their responses (Austin et al., 1998).

Seventh, all open-ended questions yielded very small response rates. While the information from the open-ended questions was rich in content, it was challenging to identify themes within responses. These questions were optional for participants to complete. Future research on this topic should think critically about different ways to collect data and improve the response rate to get more in-depth information from college

athletes and athletic directors. This might include qualitative interviews or facilitating focus groups.

Eighth, this research only explored the impact of two independent variables. There are likely multiple covariates or confounding variables that also influence service need, availability, comfort, and extent of barriers. Future research should include these potential variables (e.g., gender, religious affiliation, and team/individual sport) to determine how best to prevent and intervene with psychosocial challenges.

### **Integration of Social Workers into Athletics**

While this researcher believes that the social work profession is the correct discipline for overseeing the Athletic Well-being Model, the integration of athletic social workers into the arena of collegiate sports will come with its challenges. First, many individuals are not well-versed on all that the social work profession has to offer (Flexner, 2001). The ability to convey that social workers use their knowledge and skills to provide services for clients to help them increase their capacities for problem solving and coping is essential (NASW, 2008). Additionally, social workers must describe how they help their clients identify needed resources, facilitate interactions between a client and their environment, and make organizations responsible to the people they serve (NASW, 2008). Also, social workers must emphasize the evidenced-based approaches utilized to help individuals who are experiencing a variety of psychosocial risks (Brekke, 2014). If given the opportunity to work with athletes, social workers must demonstrate these skills to educate others about the depth of the social work profession and how it could impact the world of college sports.

Second, athletic social workers would initially be outsiders within an athletic department. Athletic social workers would need to work diligently to build rapport with administrators, coaches, and players. Athletic social workers would need to illustrate that they are not only there to support the psychosocial well-being of college athletes, but also want to support the overall success of the athletic department. However, there will be instances where the viewpoints of an athletic social worker might differ from the viewpoints of a coach or even the college athlete him or herself. For example, the athletic social worker might feel it is best to miss competitions to seek treatment. The absence of a player could be detrimental to the success of the team. However, it is the goal of the athletic social worker to ensure that overall safety and well-being supersedes participation in a sport event.

While these challenges will exist, the Athletic Well-being Model supports the vision of both the NCAA (2013a) and colleges and universities across the country (University of Florida, 2014). Not to mention, there are aspects of this model that support growing trends in higher education. For instance, the Athletic Well-being Model supports interdisciplinary collaboration between various units on a college campus (Hall, Brajtman, Weaver, Grassua, & Varpio, 2014).

### **Directions for Future Research**

In order to continually influence the psychosocial well-being of college athletes, future research must explore both macro and micro components of the Athletic Well-being Model. Some emerging themes from a macro perspective include: (1) how to integrate athletic social workers into athletic departments, (2) evaluating whether or not athletic social workers provide higher levels of services accessibility and availability as

compared to existing program models, (3) exploring whether athletic social work presence increases the acceptability of a college athlete seeking services for a psychosocial risk, (4) assessing whether services provided by athletic social workers are more effective than services provided by other campus-based programs, and (5) how to integrate the Athletic Well-being Model into social work education programs to grow the number of students and professionals interested in helping the college athlete population.

Micro oriented research includes: (1) evaluating practice models to determine what evidence-based approaches are best suited for assessing and intervening when a college athlete is experiencing psychosocial challenges, (2) how best to educate coaches and other members of a college athlete's ecological system to provide wraparound support to help college athletes meet their needs, (3) how to empower college athletes to take control of their own autonomy, (4) identifying protective factors that promote college athlete safety and well-being, and (5) exploring more about the possible contributing factors to service utilization besides division membership and profile of sport.

Both these macro and micro research agendas open up the possibility for a variety of quantitative, qualitative, and mixed-method studies. Additionally, these agendas support inter-disciplinary collaboration within a university, promotes partnerships with national, state, and local organizations, and puts the social work profession in an excellent position to advocate and influence future policy. Through future research, athletic programs and social work departments could build a framework that helps college athletes manage athletic participation and college life in a more productive and meaningful way.



**Pilot Project**

Taking all of this research into consideration, the researcher feels a logical next step is to initiate a pilot project using the Athletic Well-being Model. The NCAA offers three-year grants through their CHOICES program that support innovative ideas for helping athletes overcome psychosocial challenges (NCAA, 2014b). The researcher believes the implementation of this model would make for a strong grant proposal. In large part because the Athletic Well-being Model supports all the recommendations released by the NCAA (2013a) for promoting psychosocial well-being.

Athletic social workers could use the previously discussed practice and theoretical models to assess college athletes for psychosocial evaluation and care, address psychosocial risks during pre-participation examinations, establish standards for approaching college athletes with a psychosocial risk, schedule routine evaluations to assess a college athlete's total well-being, establish standards for submitting outside referrals for severe cases, and educate college athletes about potential psychosocial risks, amongst other duties. Additionally, athletic social workers can use their research and policy skills to track program effectiveness and to advocate for the overall success of college athletes and athletic departments.

**Conclusion**

Sports come with inherent risks, but through partnerships, education, and innovations, we can provide college athletes with the best environment for success (NCAA, 2013a). While the current environment certainly does not turn a blind eye to college athlete safety and well-being, there are areas where improvements might go a long way. In particular, more recognition about the ongoing trends and increased

availability of support services are needed as it relates to a college athlete's development of psychosocial risks. While risks are ingrained in athletics, these risks should not include such high percentages of depression, suicidal ideation, alcohol abuse, substance abuse, or eating disorders. The NCAA, athletic departments, and colleges and universities must provide more psychosocial support for their college athletes and reassure their college athletes that it is imperative they seek treatment when risks arise. Forming partnerships with athletic social workers might provide the innovative approach necessary to change the current landscape.

Furthermore, in 2013, college athletics produced revenues exceeding five billion dollars, which included 13 programs having over 100 million dollars in revenue (USA Today, 2014). There are many advocates for college athletes that feel college sports exploits the abilities of their college athletes without providing much in return (Gill, 2014). Supporting the Athletic Well-being Model is one way athletic programs could spend their profits to invest in the safety and well-being of college athletes. While having millions of dollars in revenue is certainly appealing, ensuring college athlete success on the field, in the classroom, and in life is priceless.

## Athletic Director Survey

## Current Service Structure

**Question One: To what extent do you think these services are needed for college athletes?**

[illegible]

Athletic Training (e.g., injury prevention and treatment)									
Career Development (e.g., resume workshops, interviewing practice, and job placement)									
Medical Services (e.g., medical consultation, medical procedures, and rehabilitation services)									
Mental Health Services (e.g., treatment for psychological issues such as depression anxiety, eating disorders, or other psychiatric disorders, and mental health medication monitoring)									
Suicide Prevention (e.g., crisis management individual counseling, grief support, and community outreach/education)									
Tutoring Services (e.g., academic assistance, developing study skills, and test/paper preparation)									
Other Service One (please list and indicate frequency)									

Other Service Two (please list and indicate frequency)									
---	--	--	--	--	--	--	--	--	--

**Question Two: What others services do you believe your college athletes might benefit from receiving?**

**Question Three: When needed by a college athlete how available are the following services on your campus?**

[illegible]



**Question Six: The following statements are about obstacles that may come in the way when a college athlete seeks the services listed above. Please mark to what extent you think each statement may be an obstacle to your college athletes.**

[illegible]

The fifth barrier is fearing that your Athletic Director will know you are receiving services.									
The sixth barrier is fearing that your coaches will know you are receiving services.									
The seventh barrier is concern over the stigma for using services.									
The eighth barrier is the fear that using services will have a negative impact on your sports performance.									
The ninth barrier is the belief that no one will understand your problems if you seek services.									
The tenth barrier is the belief that a service provider would not understand the life of a college athlete.									
The eleventh barrier is the fears that your teammates will know you are receiving services.									
The twelfth barrier is your lack of knowledge of available services.									
The thirteenth barrier is the fear that people will believe you are weak for needing help.									



**Athletic Administrator Demographics: We will now ask you a few questions about yourself.**

1. How many **years** have you been in your current position? \_\_\_\_\_
2. How many **years** have you worked in intercollegiate athletics? \_\_\_\_\_
3. How old are you? \_\_\_\_\_ years
4. Gender (**select**):
  - A. Male
  - B. Female
5. Ethnicity (**select all that apply**):
  - A. American Indian or Alaskan Native
  - B. Asian
  - C. Black or African American
  - D. Native Hawaiian or Other Pacific Islander
  - E. White
  - F. Other (please specify)
6. Highest Level of Education Completed (**select**):
  - A. High School Diploma
  - B. Bachelor Degree
  - C. Master Degree
  - D. Doctorate
  - E. Other (please specify)
7. Please select the NCAA Division Membership of your college or university?
  - A. Division I
  - B. Division II
  - C. Division III
8. What is the enrollment size of your college or university? \_\_\_\_\_
9. What is the religious affiliation of your college or university (if none leave blank)? \_\_\_\_\_

10. Is your college or university a Historically Black College?

A. Yes

B. No

**Thank you for your time and participation in this study.**

[illegible]

Medical Services (e.g., medical consultation, medical procedures, and rehabilitation services)									
Mental Health Services (e.g., treatment for psychological issues such as depression anxiety, eating disorders, or other psychiatric disorders, and mental health medication monitoring)									
Suicide Prevention (e.g., crisis management individual counseling, grief support, and community outreach/education)									
Tutoring Services (e.g., academic assistance, developing study skills, and test/paper preparation)									
Other Service One (please list and indicate frequency)									
Other Service Two (please list and indicate frequency)									

**Question Two: What are the 2-3 other services that would be beneficial to helping you meet your own needs?**

**Question Three: When needed by a college athlete, how available are the following services on your campus?**

[illegible]

Suicide Prevention (e.g., crisis management individual counseling, grief support, and community outreach/education)									
Tutoring Services (e.g., academic assistance, developing study skills, and test/paper preparation)									
Other Service One (please list and indicate frequency)									
Other Service Two (please list and indicate frequency)									

**Question Four: If you needed these services how comfortable would you feel with seeking them?**

[illegible]

Mental Health Services (treatment for eating disorders, treatment for individuals with anxiety, personality, mood, and other psychotic disorders, and medication monitoring)									
Substance Abuse Addiction Services (intervention, treatment, and withdrawal services)									
Suicide Prevention (e.g., crisis management individual counseling, grief support, and community outreach/education)									
Tutoring Services (academic assistance, developing study skills, and test/paper preparation)									
Other (Please Specify)									

**Question Five: The following statements are about obstacles that may come in the way when you seek the services listed above. Please mark to what extent you think each statement may be an obstacle.**

[illegible]

The fourth barrier is the lack of privacy and confidentiality provided by service providers.									
The fifth barrier is fearing that your Athletic Director will know you are receiving services.									
The sixth barrier is fearing that your coaches will know you are receiving services.									
The seventh barrier is concern over the stigma for using services.									
The eighth barrier is the fear that using services will have a negative impact on your sports performance.									
The ninth barrier is the belief that no one will understand your problems if you seek services.									
The tenth barrier is the belief that a service provider would not understand the life of a college athlete.									
The eleventh barrier is the fears that your teammates will know you are receiving services.									
The twelfth barrier is your lack of knowledge of available services.									
The thirteenth barrier is the fear that people will believe you are weak for needing help.									



**Question Six: What other obstacles or issues do you think prevents you from seeking help?**

**Question Seven: What do you think would be helpful to overcome these obstacles?**

**College Athlete Demographics: We will now ask you a few questions about yourself.**

11. How old are you? \_\_\_\_\_years

12. What is your grade level?

- A. Freshman
- B. Sophomore
- C. Junior
- D. Senior

13. Gender (**select**):

- C. Male
- D. Female

14. Ethnicity (**select all that apply**):

- G. American Indian or Alaskan Native
- H. Asian
- I. Black or African American
- J. Native Hawaiian or Other Pacific Islander
- K. White
- L. Other (please specify)

15. What sport do you play? \_\_\_\_\_

16. Is your sport a high or low profile sport? High profile refers to sports with geographic importance, strong fan support, increased media attention and/or higher rates of athletic department funding.

A. High

B. Low

17. How many years have you played your sport at the collegiate level? \_\_\_\_\_

18. Please select the NCAA Division Membership of your college or university?

D. Division I

E. Division II

F. Division III

**Thank you for your time and participation in this study.**

## Appendix C.

*Pre-notification Letter*

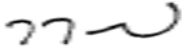
Dear [Insert Athletic Director],

You are invited to participate in a research study exploring the current support services available to college athletes at your school. Your college athletes are also asked to participate by providing their opinions about current support services. You and your college athletes were randomly selected as a study participant because of your role within a college or university athletic department.

This letter is to serve as a pre-notification of your selection in this study. You will receive a packet of information via email in a week with further instructions for completing an anonymous web-based survey and how to engage your college athletes in this research.

I look forward to hearing your point of view and the views of your college athletes. It is my hope that we can all work together to improve the lives of the college athletes who compete for your athletic program.

Sincerely,



**Matt A. Moore, MSW, ABD**  
Visiting Lecturer/Doctoral Candidate  
Indiana University School of Social Work

## Appendix D.

*Study Information Sheet*

IRB STUDY #1405046295

## INDIANA UNIVERSITY STUDY INFORMATION SHEET FOR

**Taking a Timeout to Ensure Well-being: Social Work Involvement in College Sports**

Athletic Directors and college athletes are invited to participate in a research study exploring the current services available to college athletes. You were selected as a possible participant because of your affiliation with the National College Athletic Association. I ask that you read this form and ask any questions you may have before agreeing to be in the study.

The study is being conducted by Indiana University School of Social Work Visiting Lecturer and Doctoral Candidate, Matt Moore. Dr. Patrick Sullivan is the faculty member overseeing this research.

**STUDY PURPOSE**

This research explores the current support services available to college athletes at colleges and universities across the nation.

**PROCEDURES FOR THE STUDY:**

If you agree to be in the study you will complete an online survey. This survey should take no longer than ten (10) minutes to complete.

**CONFIDENTIALITY**

Efforts will be made to keep your personal information confidential. We cannot guarantee absolute confidentiality. Your personal information may be disclosed if required by law. Your identity will be held in confidence in reports in which the study may be published and databases in which results may be stored.

Organizations that may inspect and/or copy your research records for quality assurance and data analysis include groups such as the study investigator and his/her research associates, the Indiana University Institutional Review Board or its designees, and (as allowed by law) state or federal agencies, specifically the Office for Human Research Protections (OHRP), who may need to access your research records.

**PAYMENT**

You will not receive payment for taking part in this study.

**CONTACTS FOR QUESTIONS OR PROBLEMS**

For questions about the study, contact the researcher Matt Moore at (317)274-0057 or [moore228@iupui.edu](mailto:moore228@iupui.edu). You may also contact Dr. Patrick Sullivan at (317)274-6728 or [wpsulliv@iupui.edu](mailto:wpsulliv@iupui.edu)

For questions about your rights as a research participant or to discuss problems, complaints or concerns about a research study, or to obtain information, or offer input, contact the IU Human Subjects Office at (317) 278-3458 or [for Indianapolis] or (812) 856-4242 [for Bloomington] or (800) 696-2949.

**VOLUNTARY NATURE OF STUDY**

Taking part in this study is voluntary. You may choose not to take part or may leave the study at any time. Leaving the study will not result in any penalty or loss of benefits to which you are entitled. Your decision whether or not to participate in this study will not affect your current or future relations with the Indiana University School of Social Work.

## Appendix E.

*Cover Letter (Athletic Director)*

Dear **[Insert Athletic Directors Name]**,

You are invited to participate in a research study exploring current services available to college athletes at your school.

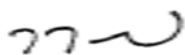
I ask for your participation in my efforts by completing a web-based survey about your college or university. This survey should take no longer than ten (10) minutes to complete. You can find the survey at the following link: **[Insert Link]**.

Taking part in this study is voluntary. You may choose not to take part or may leave the study at any time. Furthermore, you do not have to answer any questions that you do not want to answer. Your responses will be kept completely anonymous and no individual information will be identified or linked back to you or your college or university.

I am also asking that you request your college athletes to participate in this study. You can forward your college athletes the *College Athlete Cover Sheet* and the *Study Information Sheet* (both provided). This will provide them the information they need to participate in the study. The college athlete survey will also take less than ten (10) minutes to complete.

Thank you for your support of these research efforts and for all that you do for your college athletes. If you have any questions about this research, please contact Matt Moore at (317)274-0057 or [moore228@iupui.edu](mailto:moore228@iupui.edu). You may also contact Dr. Patrick Sullivan at (317)274-6728 or [wpsulliv@iupui.edu](mailto:wpsulliv@iupui.edu)

Respectfully,



**Matt A. Moore, MSW, ABD**  
Visiting Lecturer/Doctoral Candidate  
Indiana University School of Social Work

## Appendix F.

*Cover Letter (College Athlete)*

Dear College Athlete,

You are invited to participate in a research study exploring current services available to college athletes at your school.

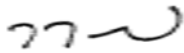
I ask for your participation in my efforts by completing a web-based survey about your college or university. This survey should take no longer than ten (10) minutes to complete. You can find the survey at the following link: [\[Insert Link\]](#).

Taking part in this study is voluntary. You may choose not to take part or may leave the study at any time. Furthermore, you do not have to answer any questions that you do not want to answer. Your responses will be kept completely anonymous and no individual information will be identified or linked back to you or your college or university.

Thank you for your support of these research efforts. Best of luck in competition!

If you have any questions about this research, please contact Matt Moore at (317)274-0057 or [moore228@iupui.edu](mailto:moore228@iupui.edu). You may also contact Dr. Patrick Sullivan at (317)274-6728 or [wpsulliv@iupui.edu](mailto:wpsulliv@iupui.edu)

Respectfully,



**Matt A. Moore, MSW, ABD**  
Visiting Lecturer/Doctoral Candidate  
Indiana University School of Social Work

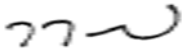
## Appendix G.

*Follow-up Emails*

Dear [Insert Athletic Director],

This is just a reminder that if you have not completed the web-based survey for my study exploring the current support services available to college athletes it is not too late. I would really like to hear from you. You can access the questionnaire at the following link [insert link]. If you already completed the questionnaire, thank you very much. I would also ask that you send a reminder email to your college athletes. Please provide them with the following link to their survey [insert link].

Sincerely,



**Matt A. Moore, MSW, ABD**  
Visiting Lecturer/Doctoral Candidate  
Indiana University School of Social Work

Dear [Insert Athletic Director],

This is the last call for individuals wishing to complete the web-based survey exploring the current support services available to college athletes. The deadline for completing this survey is [insert date]. Again, this questionnaire is anonymous and should take no longer than ten (10) minutes to complete. If you already completed the questionnaire, thank you very much. I would also ask that you send one final reminder email to your college athletes. Please provide them with the following link to their survey [insert link]. Please ask them to complete this survey by [insert date].

Sincerely,



**Matthew A. Moore, MSW**  
Visiting Lecturer/Doctoral Candidate  
Indiana University School of Social Work



## REFERENCES

- Abu-Bader, S. H. (2011). *Advanced and multivariate statistical methods for social science research*. Chicago, IL: Lyceum Books, Inc.
- Agyemang, K., Singer, J. N., & DeLorme, J. (2010). An exploratory study of black male college athletes' perceptions on race and athlete activism. *International Review for the Sociology of Sport*, 45(4), 419-435.
- Anderson, C. M., Petrie, T. A., & Neumann, C. S. (2011). Psychosocial correlates of bulimic symptoms among NCAA division-I female collegiate gymnasts and swimmers/divers. *Journal of Sport & Exercise Psychology*, 33(4), 483-505.
- Anshel, M. H., Kang, M., & Miesner, M. (2010). The approach-avoidance framework for identifying athletes' coping styles as a function of gender and race. *Scandinavian Journal of Psychology*, 51(4), 341-349.
- Armstrong, S., & Oomen-Early, J. (2009). Social connectedness, self-esteem, and depression symptomology among collegiate athletes verses nonathletes. *Journal of American College Health*, 57(5), 521-526.
- Arthur-Cameselle, J. N., & Quatromoni, P. A. (2011). Factors related to the onset of eating disorders reported by female collegiate athletes. *Sport Psychologist*, 25(1), 1-17.
- Ashford, J. B., LeCroy, C. W., & Lortie, K. L. (2006). *Human behavior in the social environment* (3<sup>rd</sup> ed.). Belmont, CA: Thompson Brooks/Cole.
- Austin, E. J., Gibson, G. J., Deary, I. J., McGregor, M. J., & Dent, J. B. (1998). Individual response spread in self-report scales: Personality correlations and consequences. *Personality and Individual Differences*, 24, 421-438.

- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52, 1-26.
- Baum, A. (2006). Eating disorders in the male athlete. *Sports Medicine*, 36(1), 1-6.
- Beauchemin, J. (2014). College student-athlete wellness: An integrative outreach model. *College Student Journal*, 48(2), 268-280.
- Branscum, P., & Sharma, M. (2010). A review of motivational interviewing-based interventions targeting problematic drinking among college students. *Alcoholism Treatment Quarterly*, 28(1), 63-77.
- Bratland-Sanda, S., & Sundgot-Borgen, J. (2013). Eating disorders in athletes: Overview of prevalence, risk factors, and recommendations for prevention and treatment. *European Journal of Sport Science*, 13(5), 499-508.
- Black, D. R., & Burckes-Miller, M. E. (1988). Male and female college athletes: Use of anorexia nervosa and bulimia nervosa weight loss methods. *Research Quarterly for Exercise and Sport*, 59, 252-256.
- Brekke, J. S. (2014). A science of social work, and social work as an integrative discipline: Have we gone too far, or not far enough? *Research on Social Work Practice*, 24(5), 517-523.
- Brenner, J., & Swanik, K. (2007). High-risk drinking characteristics in collegiate athletes. *Journal of American College Health*, 56(3), 267-272.
- Brody, A. E. (2009). Motivational interviewing with a depressed adolescent. *Journal of Clinical Psychology*, 65(11), 1168-1179.
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, 32, 513-531.

- Brown, L. J., & Malouff, J. M. (2005). The effectiveness of a self-efficacy intervention for helping adolescents cope with sport-competition. *Journal of Sport Behavior*, 28(2), 136-150.
- Buckman, J. F., Farris, S. G., & Yusko, D. A. (2013). A national study of substance use behaviors among NCAA male athletes who use banned performance enhancing substances. *Drug and Alcohol Dependence*, 131(1/2), 50-55.
- Buckman, J. F., Yusko, D. A., Farris, S. G., White, H. R., & Pandina, R. (2011). Risk of marijuana use in male and female college student athletes and nonathletes. *Journal of Studies on Alcohol & Drugs*, 72(4), 586-591.
- Buckman, J. F., Yusko, D. A., White, H. R., & Pandina, R. (2009). Risk profile of male college athletes who use performance-enhancing substances. *Journal of Studies on Alcohol & Drugs*, 70(6), 919-923.
- Burns, G. N., Jasinski, D., Dunn, S., & Fletcher, D. (2013). Academic support services and career decision-making self-efficacy in student athletes. *Career Development Quarterly*, 61(2), 161-167.
- Byrne, S., & McLean, N. (2002). Elite athletes: Effects of the pressure to be thin. *Journal of Science and Medicine in Sport/Sports Medicine Australia*, 5(2), 80-94.
- Chang, V., Scott, S., & Decker, C. (2009). *Developing helping skills: A step-by-step approach*. Belmont, CA: Brooks/Cole.
- Chatterton, J. M., & Petrie, T. A. (2013). Prevalence of disordered eating and pathogenic weight control behaviors among male collegiate athletes. *Eating Disorders*, 21(4), 328-341.

- Chatzisarantis, N., & Hagger, M. (2007). The moral worth of sport reconsidered: Contributions of recreational sport and competitive sport to life aspirations and psychological well-being. *Journal of Sports Science*, 25(9), 1047-1056.
- Compton, B. R., & Galaway, B. (1989). *Social work process*. Belmont, CA: Westworth Publishing Company.
- Cornelius, A. (1995). The relationship between athletic identity, peer and faculty socialization, and college student development. *Journal of College Student Development*, 36, 560-573.
- Dattalo, P. (2008). *Determining sample size: Balancing power, precision, and practicality*. New York: Oxford University Press.
- Dean, C., & Rowan, D. (2014). The social worker's role in serving vulnerable athletes. *Journal of Social Work Practice*, 28(2), 219-227.
- DeFreese, J. D., & Smith, A. L. (2013). Teammate social support, burnout, and self-determined motivation in collegiate athletes. *Psychology of Sport and Exercise*, 14(2), 258-265.
- Downs, A., & Ashton, J. (2011). Vigorous physical activity, sport participation, and athletic identity. *Journal of Sport Behavior*, 34(3), 228-249.
- Dziedzicki, D. J., Eberman, L. E., Kahanov, L., Mata, H., Niemann, A., Adams, H., & Turner, T. (2013). Alcohol consumption behaviors among collegiate athletes. *International Journal of Athletic Therapy and Training*, 18(1), 35-38.
- Edwards, H. (2000). Crisis of black athletes on the eve of the 21<sup>st</sup> century. *Society*, 37(3), 9-13.

- Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G\*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39, 175-191.
- Feldstein, S. W., & Forcehimes, A. A. (2007). Motivational interviewing with underage college drinkers: A preliminary look at the role of empathy and alliance. *American Journal of Drug & Alcohol Abuse*, 33(5), 737-746.
- Field, A. (2009). *Discovering statistics using SPSS* (3<sup>rd</sup> ed.). Thousand Oaks, CA: Sage Publications.
- Fletcher, D., Rumbold, J. L., Tester, R., & Coombes, M. S. (2011). Sport psychologists' experiences of organizational stressors. *Sport Psychologist*, 25(3), 363-381.
- Flexner, A. (2001). Is social work a profession? *Research on Social Work Practice*, 11(2) 152-165.
- Forbes Magazine. (2014). *March madness ratings and revenues keep reaching new heights*. Retrieved from <http://www.forbes.com/sites/tomvanriper/2014/03/02/march-madness-ratings-and-revenue-keep-reaching-new-heights/>.
- Ford, J. (2007a). Alcohol use among college students: A comparison of athletes and nonathletes. *Substance Use & Misuse*, 42(9), 1367-1377.
- Ford, J. (2008). Nonmedical prescription drug use among college students: A comparison between athletes and nonathletes. *Journal of American College Health*, 57(2), 211-220.
- Ford, J. (2007b). Substance use among college athletes: A comparison based on sport/team affiliation. *Journal of American College Health*, 55(6), 367-373.

- Foster, K. (2014). *Playbook: A career exploration program for student athletes at Ball State University*. Ball State University, Muncie, IN.
- Fouad, N., Cotter, E. W., & Kantamneni, N. (2009). The effectiveness of a career decision-making course. *Journal of Career Assessment, 17*, 338-347.
- Frye, W. S., Allen, B., & Drinnon, J. (2010). Alcohol consumption among athletes and non-athletes in Christian colleges. *Journal of Research on Christian Education, 19*(3), 313-324.
- Galli, N., Reel, J. J., Petrie, T., Greenleaf, C., & Carter, J. (2011). Preliminary development of the weight pressures in sport scale for male athletes. *Journal of Sport Behavior, 34*(1), 47-68.
- Gardiner, A. (2006). *Surfacing from depression*. Retrieved from [http://www.usatoday.com/news/health/2006-02-05-womens-health-depression\\_x.htm](http://www.usatoday.com/news/health/2006-02-05-womens-health-depression_x.htm).
- Gayles, J. G., & Hu, S. (2009). The influence of student engagement and sport participation on college outcomes among Division I student athletes. *Journal of Higher Education, 80*(3), 315-333.
- Gearity, B. (2010). Effective coaching: The winning discourse or educational foundations? *Journal of Coaching Education, 3*(1), 1-21.
- Gearity, B., & Murray, M. (2011). Athletes' experiences of the psychological effects of poor coaching. *Psychology of Sport and Exercise, 12*, 213-221.
- Germain, C. B. (1991). *Human behavior in the social environment: An ecological perspective*. New York, NY: Columbia University Press.

- Germain, C. B., & Gitterman, A. (1996). *The life model of social work practice: Advances in theory and practice*. New York, NY: Columbia University Press.
- Giacobbi, P. R., Whitney, J., Roper, E., & Butryn, T. (2002). College coaches' views about the development of successful athletes: A descriptive exploratory investigation. *Journal of Sport Behavior*, 25(2), 164-181.
- Gill, E. L. (2014). Integrating collegiate sports into social work education. *Journal of Social Work Education*, 50(2), 305-321.
- Gill, E. L. (2008). Mental health in college athletics: It's time for social work to get in the game. *Social Work*, 53(1), 85-88.
- Gill, E. L. (2009). The blunt truth: Marijuana use by college athletes and the role of social workers. *Journal of Social Work Practice and Addictions*, 9, 140-143.
- Gingerich, W. J., & Peterson, L. T. (2013). Effectiveness of solution-focused brief therapy: A systematic qualitative review of controlled outcome studies. *Research on Social Work Practice*, 23(3), 266-283.
- Goddard, M. (2004). *An assessment of the effectiveness of the CHAMPS/Life Skills Program at the University of North Texas: A pilot study* (Doctoral dissertation). Retrieved from Proquest. (3126573)
- Green, G. A. (2001). NCAA study of substance use and abuse habits of college student athletes. *Clinical Journal of Sport Medicine*, 11(1), 51-56.
- Greenleaf, C., Petrie, T. A., Carter, J., & Reel, J. J. (2009). Female collegiate athletes: Prevalence of eating disorders and disordered eating behaviors. *Journal of American College Health*, 57(5), 489-496.

- Grossbard, J. R., Lee, C. M., Neighbors, C., Hendershot, C. S., & Larimer, M. (2007). Alcohol and risky sex in athletes and nonathletes: What roles do sex motives play? *Journal of Studies on Alcohol & Drugs*, 68(4), 566-574.
- Gulliver, A., Griffiths, K., & Christensen, H. (2012). Barriers and facilitators to mental health help-seeking for young elite athletes: A qualitative study. *BioMed Central Psychiatry*, 12(1), 157-170.
- Hall, P., Brajtman, S., Weaver, L., Grassua, A., & Varpio, L. (2014). Learning collaborative teamwork: An argument for incorporating the humanities. *Journal of Interprofessional Car*, 28(6), 519-525.
- Hamrick, F. A., Evan, N. J., & Schuh, J. H. (2002). *Foundations of student affairs practice*. San Francisco, CA: Jossey-Bass.
- Harris, R. S., Aldea, M. A., & Kirkley, D. E. (2006). A motivational interviewing and common factors approach to change in working with alcohol use and abuse in college students. *Professional Psychology: Research & Practice*, 37(1), 614-621.
- Harrison, R. E. (1981). Psychosocial dimensions of student athletes: Implications for developmental studies. *Personnel & Guidance Journal*, 60(2), 113-115.
- Hoffman, S. J. (1992). *Sport and religion*. Champaign, IL: Human Kinetics Publishing.
- Hoonakker, P., & Carayon, P. (2009). Questionnaire survey nonresponse: A comparison of postal mail and internet surveys. *Journal of Human-Computer Interaction*, 25(5), 348-373.
- Hudson-Banks, K., & Kohn-Woods, L. P. (2007). The influence of racial identity profiles on the relationship between racial discrimination and depressive symptoms. *Journal of Black Psychology*, 33, 331-354.



- Hurst, C. S., Baranik, L. E., & Daniel, F. (2013). College student stressors: A review of the qualitative research. *Stress and Health, 29*(4), 275-285.
- Johnson, M. B., Sacks, D. N., & Edmonds, W. A. (2010). Counseling athletes who use performance-enhancing drugs: A new conceptual framework linked to clinical practice. *Journal of Social & Behavioral Health Sciences, 4*(1), 1-14.
- Johnston, H. L., & Carroll, D. (1998). The provision of social support to injured athletes: A qualitative analysis. *Journal of Sport Rehabilitation, 7*(4), 267-284.
- Jorm, A., Wright, A., & Morgan, A. J. (2007). Where to seek help for a mental disorder? National survey of the beliefs of Australian youth and their parents. *Medical Journal of Australia, 187*(10), 556-560.
- Kelly, C., Jorm, A., & Wright, A. (2007). Improving mental health literacy as a strategy to facilitate early intervention for mental disorders. *Medical Journal of Australia, 18*(7), 26-30.
- Kirk, G., Singh, K., & Getz, H. (2001). Risk of eating disorders among female college athletes and non-athletes. *Journal of College Counseling, 4*(2), 122-133.
- Knowles, L., Anokhina, A., & Serpell, L. (2013). Motivational interventions in the eating disorders: What is the evidence? *International Journal of Eating Disorders, 46*(2), 97-107.
- LaBrie, J. W., Lamb, T. F., Pederson, E. R., & Quinlan, T. (2006). A group motivational interviewing intervention reduces drinking and alcohol-related consequences in adjudicated college students. *Journal of College Student Development, 47*(3), 267-280.

- LaBrie, J. W., Pederson, E. R., Lamb, T. F., & Quinlan, T. (2007). A campus-based motivational enhancement group intervention reduces problematic drinking in freshman male college students. *Addictive Behaviors, 32*, 889-901.
- LaForge, L., & Hodge, J. (2011). NCAA academic performance metrics: Implications for institutional policy and practice. *Journal of Higher Education, 82*(2), 217-235.
- Lafreniere, M. K., Jowett, S., Vallerand, R. J., Donahue, E. G., & Lorimer, R. (2008). Passion in sport: On the quality of the coach-athlete relationship. *Journal of Sport & Exercise Psychology, 30*(5), 541-560.
- Lenth, R. (2001). Some practical guidelines for effective sample size determination. *The American Statistician, 55*(3), 187-193.
- Lester, D. (2014). College student stressors, depression, and suicidal ideation. *Psychological Reports, 114*(1), 293-296.
- Lopez, R. L., & Levy, J. J. (2013). Student athletes' perceived barriers to and preferences for seeking counseling. *Journal of College Counseling, 16*(1), 19-31.
- Macdonald, P., Hibbs, R., Corfield, F., & Treasure, J. (2012). The use of motivational interviewing in eating disorders: A systematic review. *Psychiatry Research, 200*(1), 1-11.
- Maniar, S., Chamberlin, R., & Moore, N. (2005). *Suicide is a real risk for student athletes*. Retrieved from [http://www1.ncaa.org/membership/ed\\_outreach/health\\_safety/suicide.pdf](http://www1.ncaa.org/membership/ed_outreach/health_safety/suicide.pdf).
- Maniar, S. D., Curry, L. A., Sommers-Flanagan, J., & Walsh, J. A. (2001). Student athlete preferences in seeking help when confronted with sport performance problems. *The Sport Psychologist, 15*, 205-220.

- Martens, M. P., Pederson, E. R., Smith, A. E., Stewart, S., & O'Brien, K. (2011). Predictors of alcohol-related outcomes in college athletes: The roles of trait urgency and drinking motives. *Addictive Behaviors, 36*(5), 456-464.
- Martens, M. P., Smith, A. E., & Murphy, J. G. (2013). The efficacy of single-component brief motivational interventions among at-risk college drinkers. *Journal of Consulting & Clinical Psychology, 81*(4), 691-701.
- McLester, C. N., Hardin, R., & Hoppe, S. (2014). Susceptibility to eating disorders among collegiate female student-athletes. *Journal of Athletic Training, 49*(3), 406-410.
- Midgley, J., & Livermore, M. (2009). *The handbook of social policy* (2<sup>nd</sup> ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Miller, K. E., & Hoffman, J. H. (2009). Mental well-being and sport-related identities in college students. *Sociology of Sport Journal, 26*(2), 335-356.
- Miller, W. R., & Rollnick, S. (2002). *Motivational interviewing: Preparing people for change*. (2<sup>nd</sup> ed.). New York, NY: The Guilford Press.
- Moore, M., & Tschannen-Moran, B. (2010). *Coaching psychology manual*. Baltimore, MD: Wellcoaches Corporation.
- Munoz-Leiva, F., Sanchez-Fernandez, J., Montoro-Rios, F., & Ibanez-Zapata, J. A. (2009). Improving the response rate and quality in web-based surveys through the personalization and frequency of reminder mailings. *Quality & Quantity, 44*, 1037-1042.

Myers, J. E., Sweeney, T. J., & Witmer, J. M. (2000). The wheel of wellness counseling for wellness: A holistic approach to treatment planning. *Journal of Counseling and Development*, 78, 251-266.

National Association of Social Workers. (2008). *Code of ethics*. Washington, DC: NASW.

National Collegiate Athletic Association. (2014a). *Academics*. Retrieved from <http://www.ncaa.org/about/what-we-do/academics>.

National Collegiate Athletic Association. (2014b). *NCAA CHOICES*. Retrieved from <http://www.ncaa.org/CHOICES>.

National Collegiate Athletic Association. (2013a). *Health and safety*. Retrieved from <http://www.ncaa.org/wps/wcm/connect/public/ncaa/health+and+safety/>.

National Collegiate Athletic Association. (2012). *Members by division*. Retrieved from <http://web1.ncaa.org/onlineDir/exec/divisionListing>.

National Collegiate Athletic Association. (2013b). *NATA, NCAA and others announce mental health recommendation*. Retrieved from <http://www.ncaa.org/about/resources/media-center/news/nata-ncaa-and-others-announce-mental-health-recommendations>.

National Collegiate Athletic Association. (2014c). *Race and gender demographic search*. Retrieved from <http://web1.ncaa.org/rgdSearch/exec/instSearch>.

- Neal, T. L., Diamond, A. B., Goldman, S., Klossner, D., Morse, E. D., Pajak, D. E., ... Welznat, V. (2013). Inter-association recommendations for developing a plan to recognize and refer student-athletes with psychological concerns at the collegiate level: An executive summary of a consensus statement. *Journal of Athletic Training, 48*(5), 716-720.
- Nitzke, S. A., Voichick, S. J., & Olson, D. (1992). Weight cycling practices and long term health conditions in a sample of former wrestlers and other collegiate athletes. *Journal of Athletic Training, 27*(3), 257-261.
- Parsons, J. (2013). Student athlete perceptions of academic success and athlete stereotypes on campus. *Journal of Sport Behavior, 36*(4), 400-416.
- Payne, M. (2005). *Modern social work theory: A critical introduction* (3<sup>rd</sup> ed.). Chicago, IL: Lyceum.
- Petrovich, A. (2004). Using self-efficacy theory in social work teaching. *Journal of Social Work Education, 40*(3), 429-443.
- Pillay, Y. (2005). Racial identity as a predictor of the psychological health of African American students at a predominantly white university. *Journal of Black Psychology, 31*, 46-66.
- Poczwadowski, A., Barrot, J., & Jowett, S. (2006). Diversifying approaches to research on athlete-coach relationships. *Psychology of Sport and Exercise, 7*, 125-142.
- Potuto, J., & O'Hanlon, J. (2007). National study of student-athletes regarding their experiences as college students. *College Student Journal, 41*(4), 947-966.
- Prochaska, J., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist, 1102-1114*.

- Prochaska, J., & Prochaska, J. (2002). *Social worker's desk reference*. New York, NY: Oxford University Press.
- Qualtrics. (2012). *Overview*. Retrieved from <http://www.qualtrics.com/why-survey-software>.
- Rasnack, C. N. (2014). *The effects of a life skills program on the social and academic performance of freshman student-athletes*. Western Washington University, Bellingham, WA.
- Remer, R., Tongate, F. A., & Watson, J. (1978). Athletes: Counseling the over privileged minority. *Personnel & Guidance Journal*, 56(10), 626-629.
- Rubin, A., & Babbie, E. (2011). *Research methods for social work* (7<sup>th</sup> ed.). Belmont, CA: Wadsworth/Thompson Learning.
- Sack, A. (2001). Big-time athletics vs. academic values: It's a rout. *Chronicle of Higher Education*, 47(20), 7-11.
- Saleebey, D. (2002). *The strengths perspective in social work practice* (3<sup>rd</sup> ed.). New York, NY: Allyn & Bacon.
- Sanford-Martens, T., Davidson, M., Yakushko, O., Martens, M., & Hinton, P. (2005). Clinical and subclinical eating disorders: An examination of collegiate athletes. *Journal of Applied Sport Psychology*, 17(1), 79-86.
- Schriver, J. M. (2011). *Human behavior and the social environment* (5<sup>th</sup> ed.). New York, NY: Allyn & Bacon.
- Schrotenboer, B. (2012, September 25). Division III lends perspective for some fleeing big time. *USA Today*, pp. 02c.

- Schwarz, H. C., Gairett, R. L., Aruguete, M. S., & Gold, E. S. (2005). Eating attitudes, body dissatisfaction, and perfectionism in female college athletes. *North American Journal of Psychology*, 7(3), 345-352.
- Scott, A. B., & Ciani, K. D. (2008). Effects of an undergraduate career class on men's and women's career decision-making self-efficacy and vocational identity. *Journal of Career Development*, 34, 263-285.
- Simpson, H. B., & Zuckoff, A. (2011). Using motivational interviewing to enhance treatment outcomes in people with obsessive-compulsive disorder. *Cognitive Behavioral Practice*, 18, 28-37.
- Smith, R. E., Smoll, F. L., & Curtis, B. (2007). Effects of a motivational climate intervention for coaches on young athletes' sport performance anxiety. *Journal of Sport & Exercise Psychology*, 29, 39-59.
- Steinfeldt, J. A., Reed, C., & Steinfeldt, M. C. (2010). Racial and athletic identity of African American football players at historically black colleges and universities and predominantly white institutions. *Journal of Black Psychology*, 36(1), 3-24.
- Stewart, C., & Owens, L. (2011). Behavioral characteristics of 'favorite' coaches: Implications for coach education. *Physical Educator*, 68(2), 90-97.
- Stone, G. L., & McMichael, J. (1996). Thinking about mental health policy in university and college counseling centers. *Journal of College Student Psychotherapy*, 10(3), 3-27.
- Stone, J. A., & Strange, C. C. (2000). Quality of student experiences of freshmen intercollegiate athletes. *Journal of College Student Development*, 30, 148-154.

- Storch, E. A., Storch, J. B., Welsh, E., & Okun, A. (2002). Religiosity and depression in intercollegiate athletes. *College Student Journal*, 36(4), 526-532.
- Suggs, W. (2003). Division III stays the course, for now. *Chronicle of Higher Education*, 49(35), 37-38.
- Thomas, J. R., Nelson, J. K., & Silverman, S. J. (2011). *Research methods in physical activity*. Champaign, IL: Human Kinetics Publishing.
- Tollison, S. J., Lee, C. M., Neighbors, C., Neil, T. A., Olson, N. D., & Larimer, M. E. (2008). Questions and reflections: The use of motivational interviewing microskills in peer-led brief alcohol intervention for college students. *Behavior Therapy*, 39, 183-194.
- Treasure, J., & Ward, A. (1997). A practical guide to the use of motivational interviewing in anorexia nervosa. *European Eating Disorders Review*, 5(2), 102-114.
- Turner, F. (Ed.) (1996). *Social work treatment: Interlocking theoretical approaches* (4<sup>th</sup> ed.). New York, NY: The Free Press.
- University of Florida. (2014). *Vision*. Retrieved from <http://www.gatorzone.com/vision/>.
- USA Today. (2013). *NCAA finances*. Retrieved from <http://www.usatoday.com/sports/college/schools/finances/>.
- Wagner, M. L., Liles, R. G., Broadnax, R., & Nuriddin-Little, A. (2006). Use of alcohol and other drugs: Undergraduate HBCU students. *Negro Educational Review*, 57(3/4), 229-241.



- Wahesh, E., Milroy, J. J., Lewis, T. F., Orsini, M. M., & Wyrick, D. L. (2013). Hazardous drinking by first-year college-athletes: The differential roles of drinking motives, alcohol consequences, and season status. *Journal of Alcohol and Drug Education, 57*(2), 66-84.
- Watson, J. C. (2006). College student athletes and counseling: Factors influencing the decision to seek counseling services. *College Student Journal, 40*(1), 35-42.
- Watson, J. C. (2005). College student-athletes' attitudes toward help-seeking behavior and expectations of counseling services. *Journal of College Student Development, 46*, 442-449.
- Watson, J., & Kissinger, D. B. (2007). Athletic participation and wellness: Implications for counseling college student-athletes. *Journal of College Counseling, 10*(2), 153-162.
- Weaver, C. C., Martens, M. P., Cadigan, J. M., Takamatsu, S. K., Treloar, H., & Pederson, E. R. (2013). Sport-related achievement motivation and alcohol outcomes: An athlete-specific risk factor among intercollegiate athletes. *Addictive Behaviors, 38*(12), 2930-2936.
- Weiss, S. (2010). Cross-addiction on campus: More problems for student-athletes. *Substance Use & Misuse, 45*(10), 1525-1541.
- Weiss, C. V., Mills, J. S., Westra, H. A., & Carter, J. C. (2013). A preliminary study of motivational interviewing as a prelude to intensive treatment for an eating disorder. *Journal of Eating Disorders, 1*(34), 1-19.

- Westra, H. A. (2004). Managing resistance in cognitive behavioral therapy: The application of motivational interviewing in mixed anxiety and depression. *Cognitive Behavioral Therapy*, 33(4), 161-175.
- Westra, H. A., Aviram, A., & Odell, F. K. (2011). Extending motivational interviewing to the treatment of major mental health problems: Current directions and evidence. *Canadian Journal of Psychiatry*, 56(11), 643-650.
- Williams, R., Perko, M., Udan, S., Leeper, J., Belcher, D., & Leaver-Dunn, D. (2008). Influences on alcohol use among NCAA athletes: Application of the social ecology model. *American Journal of Health Studies*, 23(3), 151-159.
- Wrisberg, C. A., & Fisher, L. A. (2005). Staying connected to teammates during rehabilitation. *Athletic Therapy Today*, 10(2), 62-63.
- Wrisberg, C. A., Withycombe, J. L., Simpson, D., Loberg, L. A., & Reed, A. (2012). NCAA division-one administrators' perceptions of the benefits of sport psychology services and possible roles for a consultant. *Sport Psychologist*, 26(1), 16-28.
- Yang, J., Peek-Asa, C., Lowe, J. B., Heiden, E., & Foster, D. T. (2010). Social support patterns of collegiate athletes before and after injury. *Journal of Athletic Training*, 45(4), 372-379.
- Yusko, D., Buckman, J., White, H., & Pandina, R. (2008). Alcohol, tobacco, illicit drugs, and performance enhancers: A comparison of use by college student athletes and nonathletes. *Journal of American College Health*, 57(3), 281-290.

- Zamboanga, B. L., Rodriguez, L., & Horton, N. J. (2008). Athletic involvement and its relevance to hazardous alcohol use and drinking game participation in female college athletes: A preliminary investigation. *Journal of American College Health, 56*(6), 651-656.
- Zenic, N., Stipic, M., & Sekulic, D. (2013). Religiousness as a factor of hesitation against doping behavior in college-age athletes. *Journal of Religion and Health, 52*(2), 386-396.
- Zerler, H. (2009). Motivational interviewing in the assessment management of suicidality. *Journal of Clinical Psychology, 65*(11), 1207-1217.
- Zucker, N. L., Womble, L. G., Williamson, D. A., & Perrin, L. A. (1999). Protective factors for eating disorders in female college athletes. *Eating Disorders, 7*(3), 207-219.

## **CURRICULUM VITAE**

**Moore, Matthew Allen**

### **EDUCATION:**

Indiana University	Ph.D.	2015
Indiana University	Master of Social Work	2011
Hanover College	BA Psychology/Philosophy	2006

### **APPOINTMENTS:**

#### ***ACADEMIC***

##### **Ball State University – Contract Faculty (8/2014 – Present)**

- Teach undergraduate courses for the Ball State University Department of Social Work
- Experience teaching face-to-face, online, and blended/hybrid courses.
- Teaching assignments include: social welfare policy, practice with individuals and families, and introduction to social work.

##### **Indiana University – Visiting Lecturer (8/2013 – 8/2014)**

- Teach undergraduate and graduate courses for the Indiana University School of Social Work.
- Experience teaching face-to-face, online, and blended/hybrid courses.
- Teaching assignments include: social welfare policy, child welfare practice, human behavior in the social environment, quantitative research, program evaluation, and practice/field seminar.

##### **Indiana University - Associate Faculty (8/2012 – 8/2013)**

- Taught undergraduate courses for the Indiana University School of Social Work.
- Experience teaching face-to-face, online, and blended courses.
- Courses taught include: child welfare practice and policy, quantitative research, and program evaluation.

##### **Indiana University - Doctoral Researcher (8/2011 – 5/2013)**

- Member of the Community Alternatives to Psychiatric Residential Treatment Facilities (CA-PRTF) Medicaid Grant Evaluation Team for the State of Indiana Division of Mental Health and Addiction.
- Conducted quantitative research to measure the impact intensive community-based services had on child mental health functioning.
- Conducted program evaluations on alcohol and substance abuse programs.

- Worked with professionals that help clients address public health issues and programs that seek to improve individual, group, and community well-being.

#### **Indiana University - Curriculum Contractor (5/2012 – 8/2012)**

- Developed a blended social work course focusing on child welfare practice and policy.
- Created all assignments, presentations, and online materials for this course.
- Integrated blended technologies into the delivery of the course.

#### ***NON-ACADEMIC***

#### **Indiana Department of Child Services – Foster Parent Consultant (9/2011 – Current)**

- Provide consultation to the Indiana Department of Child Services.
- Deliver training to foster and pre-adoptive families.
- Work with foster and pre-adoptive families to help them best serve Indiana's vulnerable children.

#### **Zionsville Community High School (5/2013 – Present)**

- Chair of the Sport Performance and Well-being Team
- Train coaches, high school athletes, and the community on the psychosocial risks associated with athletic participation.
- Assess and intervene when a high school athlete is experiencing psychosocial risks.
- Serve as an advisor/mentor to high school athletes and teams experiencing challenging times.

#### **Indiana University - Curriculum Writer (9/2009 – 7/2011)**

- Developed, wrote, and modified training curricula according to Best Practice guidelines in response to training needs of the Indiana Department of Child Services and the Indiana University School of Social Work.
- Conducted assessments and research to identify new developmental needs and training methods for adult learners.
- Led multi-disciplinary curriculum workgroups to provide consultation services.
- Delivered training to child welfare staff to monitor delivery and effectiveness of curricula.
- Conducted surveys to assess emerging training needs.
- Curricula topics included: engagement, teaming, assessment, substance abuse, mental health, child abuse and neglect, permanency, involuntary clients, and worker safety.

#### **Indiana University - Training Specialist (7/2007 – 9/2009)**

- Conducted training based on Best Practice guidelines across Indiana for the Department of Child Services and other social work professionals.
- Served on workgroups that aided in curriculum development.
- Trained over 1,500 adult learners on topics pertaining to child welfare.

### **Department of Child Services - Family Case Manager (6/2006 – 7/2007)**

- Assessed levels of risk to determine harm for children and their caregivers.
- Performed needs assessments to determine treatment options for children and their caregivers.
- Worked with multi-disciplinary teams facilitating Child and Family Team Meetings
- Maintained case files and detailed documentation on all levels of work.
- Testified in court on matters pertaining to Indiana Department of Child Services policy and state and federal law.

### **COMMITTEES:**

IV-E Committee	Member	2014-Present
Admittance Committee	Member	2014-Present
BSW Curriculum Committee	Member	2013-2014
Faculty Search and Screen Committee	Member	2013-2014
EC Moore Symposium on Teaching Excellence	Event Planner	2013-2014

### **PROFESSIONAL ORGANIZATIONS:**

National Association of Social Workers	Member	2013-Present
Baccalaureate Social Work Program	Member	2011-Present

### **PROFESSIONAL HONORS AND AWARDS:**

Finalist GADE Ph.D. Teaching Award	Indiana University	2014
Phi Kappa Social Work Honor Society	Indiana University	2011

### **TEACHING:**

S100	Introduction to Social Work	Face-to-Face	Instructor	F2014	32 Students
S100	Introduction to Social Work	Face-to-Face	Instructor	S2015	30 Students
S100	Introduction to Social Work	Face-to-Face	Instructor	S2015	30 Students
S100	Introduction to Social Work	Online	Instructor	S2015	20 Students
S220	Social Welfare Policy	Face-to-Face	Instructor	F2014	29 Students
S220	Social Welfare Policy	Face-to-Face	Instructor	F2014	25 Students
S220	Social Welfare Policy	Face-to-Face	Instructor	S2015	31 Students
S371	Introduction to Research	Online	Instructor	S2014	20 Students
S371	Introduction to Research	Online	Instructor	S2014	12 Students
S371	Introduction to Research	Online	Instructor	S2015	15 Students
S372	Statistical Reasoning	Face-to-Face	Instructor	S2014	21 Students
S401	Field Seminar I	Face-to-Face	Instructor	F2013	9 Students
S402	Field Seminar II	Face-to-Face	Instructor	S2014	9 Students

S410	Individual/Family Practice	Face-to-Face	Instructor	F2014	23 Students
S410	Individual/Family Practice	Face-to-Face	Instructor	S2015	16 Students
S442	Child Welfare Practice	Hybrid	Instructor	F2012	23 Students
S442	Child Welfare Practice	Hybrid	Instructor	F2013	19 Students
S442	Child Welfare Practice	Hybrid	Instructor	F2014	11 Students
S472	Program Evaluation	Face-to-Face	Instructor	S2013	21 Students
S472	Program Evaluation	Face-to-Face	Instructor	S2014	25 Students
S502	Foundation Research	Face-to-Face	Instructor	S2014	11 Students
S503	Human Behavior	Face-to-Face	Instructor	F2013	18 Students
S505	Social Welfare Policy	Face-to-Face	Instructor	F203	20 Students

## **SERVICE:**

### **LOCAL**

Zionsville Community High School	Head Tennis Coach	2008-Present
Indiana Department of Child Services	Licensed Foster Parent	2011-2015
Hamilton County Special Olympics	Volunteer Coach	2002-2012
United States Dream Academy	Teacher	2009-2010

### **UNIVERSITY**

IUPUI Mentoring Academy	Member	2014
Student Outreach Clinic	Developer	2010-2012
Indiana Commission on Childhood Poverty	Assistant to the Dean	2010-2011
Child Safety Forum	Co-chair	2010-2011

## **PUBLICATIONS:**

**Moore, M. A., & Walton, B. (2013).** Improving the mental health functioning of youth in rural communities. *Contemporary Rural Social Work, 5*, 61-80.

## **RESEARCH:**

### **PRESENTATIONS**

**Moore, M. A. (2015).** The acceptability of psychosocial services amongst college athletes. BPD Annual Conference, Kansas City, MO.

Walton, B., & **Moore, M. A. (2012).** Behavioral health outcome management tools across the life span. Presented at the Indiana Rural Health Association Conference, Indianapolis, IN.

**Moore, M. A.** (2013). Blended learning: Educating the child welfare workers of tomorrow. Presented at the Edward C. Moore Symposium on Excellence in Teaching, Indianapolis, IN.

Walton, B., **Moore, M. A.**, & Merritt-Mulamba, T. (2012). Cross-system framework: Assessing needs of child welfare involved youth and families. Presented at Indiana University Research Day, Indianapolis, IN.

**Moore, M. A.** (2013). Expanding the social work profession: Social workers in college athletics. Presented at the National Association of Social Workers Indiana Chapter Conference, Indianapolis, IN.

**Moore, M. A.** (2013). Getting in the game: Athletic social workers and the utilization of social work theory. Presented at the College Sport Research Institute Conference, Chapel Hill, NC.

**Moore, M. A.**, & Walton, B. (2012). Intensive community-based services: Improving child mental health functioning in rural areas. Presented at the National Institute for Social Work and Human Services in Rural Areas Conference, Nashville, IN.

**Moore, M. A.** (2014). Taking a timeout to ensure well-being: Social work involvement in college sports. Presented at the University of Georgia Sport Symposium, Athens, GA.

#### **POSTER PRESENTATIONS**

**Moore, M. A.** (2012). Addressing the psychosocial risks of college athletes: Getting in the game with evidenced-based practice. Presented at Indiana University Research Day, Indianapolis, IN.

**Moore, M. A.** (2012). Disclosing child sexual abuse: The influence of forensic interviewing models. Presented at the Ph.D. Symposium, Indianapolis, IN.

**Moore, M. A.** (2012). Intensive community-based services: Effectively improving child mental health functioning in urban and rural areas. Presented at the National Children's Mental Health Research and Policy Conference, Tampa, FL.

**Moore, M. A.** (2012). Using behavioral health and outcome management tools to predict improvement in youth mental health functioning. Presented at the National CANS Conference, Indianapolis, IN.

#### **INVITED PRESENTATIONS**

**Moore, M. A.** (2014). The Athletic Social Worker. The College Sport Research Institute Conference, Columbia, SC.



**Moore, M. A.** (2014). From competition to well-being: The need for athletic social workers. The International Sport and Society Conference, Rio de Janeiro, Brazil.

**Moore, M. A.** (2015). The Athletic Social Worker: Getting in the Game to Ensure Athlete Safety and Well-being. The International Sport and Society Conference, Toronto, Canada.